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## Measurement of Systematic Change in the Alliances Program in Samtskhe-Javakheti

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# Executive Summary

The present research was conducted within the frameworks of the project “ Rural Development in the region of Samtskhe-Javakheti” (Market Alliances Against Poverty in Samtskhe-Javakheti) financed by the Swiss Agency for Development and Cooperation SDC.

The purpose of this research was to attempt to measure systemic changes in the Alliances Programs. As such, the research was not intended to aggregate or verify the existing monitoring and evaluation conducted by Mercy Corps but instead, is looking for the broader impact of the project on general economic circumstances, patterns of life and decision-making.

In order to do that, the project undertook a series of focus groups and semi-structured interviews with program staff. It also conducted a field survey of 634 households, made up of 276 beneficiaries and 358 non-beneficiaries, who acted as ‘control group’. The results of the research, presented below, integrate the findings of all of the research. It is presented in four sections; an overview of the context of the project, a summary of the project outputs, a discussion of core market improvements and a review of the analysis of systemic behavioral change. The analysis of systemic behavioral change is further broken down into orientation to the market, decision making, education and health.

The general context of the Mercy Corps project is well understood. At 20-40%, agriculture makes up for a larger part of GDP in Samtskhe-Javakheti than in any other region in Georgia. The region is particularly well known for its production of potatoes and dairy products. The region is also ethnically diverse, though the large ethnic Armenian population are overwhelmingly concentrated in the Javakheti half of the region. As the Alliances project has only been working in the Samtskhe region up until now, their beneficiaries have been overwhelmingly ethnically Georgian.

Our survey allowed us to verify several crucial elements about the economic profile and demographics of the Mercy Corps target group as well as typical gender dynamics of target households. The target farmers in the project have 2-5 cows and generally have less than 1 hectare of land. In our survey the average was 0.6 hectares. Most farmers are involved in a mix of dairy and crop farming. This production is mainly consumed by the household, but most households produce and sell some cheese and vegetables for cash. A smaller proportion of households also sell liquid milk and meat. Production generally is characterized by extremely low productivity and a ‘low-input and low-output’ model of investment and production.

Households have an average of around 5 people and 60% of households include at least one pensioner. Almost all of the farmers we spoke to have completed secondary education, 32% have completed some kind of technical education and 18% have a university degree.

Both women and men overwhelmingly acknowledge the supremacy of men in family decision making. However, practically, women have far more influence and control than this would suggest, for two reasons. First, both male and female interviewees acknowledge that big planning or spending decisions are generally ‘family’ decisions, even if the man has the final say. Second, in many instances, for a range of reasons, women manage the day-to-day finances of the household and, as a result, often effectively control far more of the household income than men.

However, the division of labor is generally unfavorable to women. Women are generally responsible for everyday housework such as cleaning, washing, preparing meals and looking after the elderly and children. In addition, they are responsible for much of the day-to-day agricultural activities like milking cows and weeding as well as the processing of agricultural products, most importantly making cheese, but also making jams pickles, canned goods and preserves for the winter.

Traditionally male tasks are those that require physical strength, technical knowledge or travel outside the household. This means that driving cars or agricultural machinery as well as negotiating with tractor drivers or

veterinaries is generally considered man's work. In other words, the public sphere is predominantly male dominated.

While there is some flexibility in these gender roles, this flexibility also generally works to the disadvantage of women. While women are sometimes asked to do physically demanding work that might sometimes be considered 'men's' work, men are very rarely expected to help with domestic responsibilities.

To try and facilitate economic development in the region the project works on both demand and supply issues. To help with demand, the project supports milk collection centers and milk processors, works with the meat market and a regional slaughterhouse and supported a local bank in providing cheaper credit.

To support the supply side, the project works on animal health, nutrition and breeding. In animal health they work with a regional pharmaceutical supplier to expand the scope of their activities in the region, on nutrition they support farmers in buying equipment to increase the volume and quality of the hay they can collect and in breeding they have supported the purchase of high quality bulls and attempted to encourage artificial insemination.

The immediate impact of these projects, in terms of the recipients and time/money savings are documented by the annual project reports and are not reported here.

However, our research suggested that the project had created a range of positive impacts on the beneficiaries compared to the non-beneficiaries and had also created a range of spill-over and crowding-in effects. Its impact on social behaviour is also positive in most areas, except decision making.

Most obviously, the beneficiary group own an average of 3.4 cows compared to the non-beneficiaries who own an average of 2.3. As a result the beneficiaries produce around 19 liters per day and the non-beneficiaries produce around 13 liters per day.

The second major difference between the two groups is that the beneficiaries seem to be more market oriented generally, with a higher proportion selling their products for cash and generating a higher income as a result. The difference between the two groups in market orientation is summarised in the table below.

Figure 1: Difference between beneficiaries and non-beneficiaries in proportion who sell products for cash and income generated in the last 12 months

	Proportion who sell for cash		Annual income generated by those who sell (GEL) <sup>1</sup>	
	Beneficiary	Non-beneficiary	Beneficiary	Non-beneficiary
Liquid milk	18%	10%	800	250
Cheese	54%	37%	500	400
Meat	14%	12%	600	500
Crops	60%	55%	600	500

As we can see, the beneficiary group are more likely to sell their products for cash (either or a significant proportion of them) in every category of product, but in milk and cheese the difference is highest and in meat the difference is negligible. The beneficiaries who sell their products also generate more income in all categories, though the biggest difference by far is between the beneficiaries who sell milk and earn an average of 800 GEL per year and the non-beneficiaries who sell milk and earn an average of 250 GEL per year. In cheese beneficiaries earn 25% more and in meat and crops, 20% more.

<sup>1</sup> Note that this average is only the average of those who sell for cash and not the average of the entire population. Therefore the 800 GEL income generated for the beneficiary milk-sellers is only 800 GEL average across 18% of beneficiaries.

The improved income profile is also reflected in a slightly better profile of ownership in tangible goods in the beneficiary group.

In systematic behavioural changes, we looked at changes in attitudes to the market and changes in patterns of animal health/vet, genetics and machinery. In attitudes to the market there did seem to be some indication from both MCC and non-MCC focus groups, that there is a strong interest in selling milk to milk collection centers. Where farmers are already doing this, and where there is a consistent demand, we found farmers willing and able to increase their number of milking cows. Selling to an MCC or a milk producer was generally considered to be good in terms of price, time saving and consistency of price.

More broadly the research certainly identified growth in cattle buying, both anecdotally and in the survey. 28% of all respondents said that they had increased their livestock in the last 12 months and only 3% said they had decreased. The rest stayed the same. This growth is actually strongest in the non-beneficiary group, which suggests that the message about opportunities in the dairy and livestock sectors seems to be getting through. It is always difficult to attribute cause, but it seems reasonable to believe that the project is at least partially responsible for this change.

Systemic changes in supply improvements are more varied. In the veterinary sector almost nobody said that animal health was the biggest cause of low milk-yield or low farming productivity generally. Levels of animal disease and inoculations are also pretty similar across the two groups. It is hard to draw any strong conclusions from this, as the livestock holdings of beneficiaries and non-beneficiaries are not the same. However, it does suggest that the veterinary support program has not created any systemic changes in attitude, behaviour of environment towards animal disease yet. This is not surprising, as the animal health component only started at the end of 2012 and in spite of this fact, the program is well received. Nonetheless it might suggest the need to for the project to work on convincing farmers about the importance of this issue.

Bad genetics does seem to be a commonly acknowledged problem and one of the major reasons identified by farmers for low milk yields. In addition, the intervention which helps farmers buy bulls from Javakheti to breed in Samtskhe seems to be creating a lot of interest, particularly because the calves are very much larger and more impressive than the average calves in the region.

It seems to be embraced as an effective business model for the farmers that buy the bulls and then rent them out for breeding and is appreciated by the farmers who use the bull for breeding. At the same time, as each bull can inseminate 50 cows in a season, the impact of a relatively small number of bulls can be large. However, while there is a lot of interest in this subject, we have not yet seen evidence of farmers undertaking this activity outside of the project.

Finally, the use of farm machinery for cutting and collecting hay is generally seen as a good mechanism for farmers to more efficiently collect good quality hay and there definitely seems to be agreement amongst farmers that newer machinery can make them far more efficient. This idea is supported by the fact that the Mercy Corps partner has seen a very significant increase in his machinery sales, outside of the project. Though, again, attributing a direct causal link is difficult.

The second area where we looked for evidence of systemic behavioural change was in the structure of household decision-making and the situation facing women. We did not find any evidence that beneficiaries had more of a role in decision making than non-beneficiaries. Both groups named men as the head of the household, in overwhelmingly large numbers, and in all of our focus groups there was agreement that in most family decisions men have the final say.

That said, the project is undoubtedly having a positive impact on the situation facing women, to the extent that it is encouraging farmers to sell liquid milk rather than cheese. As this was exclusively 'women's' work it is also reducing the practical inequity in work responsibilities between genders. Our focus groups suggest that this time

saving is generally spent in other productive activities, like working on crops or with housework, but it does also allow for a higher level of recreation time.

One gender difference that the research project identified, that should be kept in mind in future Alliances project planning is that women have a somewhat different set of beliefs about the interventions required to improve agricultural productivity than men. Perhaps unsurprisingly, women put far less emphasis on the importance of farming equipment and they put far more emphasis than men on seed quality and training. Only 2% of men but 7% of women consider 'training in new techniques' to be the most important help that could be provided to improve agriculture.

We also looked for evidence of systematic behavioral change in education and healthcare. In education, one would expect that the higher income of beneficiary groups would result in higher spending on education and higher educational participation. This is demonstrated in some areas, but not in others. A slightly lower proportion of eligible children in beneficiary households attend preschool, than in non-beneficiary schools. But in the beneficiary group, non-attendance is never attributed to lack of finance. In the non-beneficiary group, 10% of children who don't attend, fail to do so for financial reasons.

At secondary-school overall costs and levels of attendance are roughly the same for both groups, but beneficiaries pay for far more outside tutoring, so one can see this as a clear social investment of their improved finances. Roughly 26% of beneficiary households pay for tutors for their school age children versus 14% for non-beneficiaries.

Oddly, this does not result in higher levels of university attendance for beneficiaries. 43% of beneficiaries, with children of the appropriate age, send them to university versus 51% in non-beneficiary households. This is very odd and may reflect a time-lag effect. However, on the positive side, slightly more beneficiaries pay for college through their own existing funds, suggesting that even though they send fewer people to university, they could if they wanted to.

Finally, in healthcare, the two groups also seem to have a similar profile, with beneficiaries spending slightly more than non-beneficiaries. Both groups have used medical services around 3.7 times in the last year. Around 60% of both groups said that there were still medical services or medicines that they needed but could not afford. Though median spending was GEL 80 in the previous month for the beneficiary group and GEL 70 for the non-beneficiary group. This is a 14% difference and does suggest that beneficiaries are also able to invest more of the better income into healthcare.

# Methodology

The focus of the survey was to look at the structural impact of the project on recipients and the broader environment. This was to involve analysis of:

- Improvements made in the core market and the knock-on effect to the local community
- Increases in incomes
- Systemic behavioral changes
  - Improved access to markets and increased roles in the meat and dairy market systems
  - Improved access to education
  - Improved access to healthcare
  - Improved participation in the decision making process at household, community and local government levels

This work, therefore, focused on the broad impact of the project and not the specific outputs or outcomes. This kind of change is generally acknowledged in monitoring and analysis to be the hardest result to quantify, as program components that have significant sustained impact are likely to effect a small number of recipients, while program components that effect a large number of recipients are likely to have a small impact in each case.

The project relied on a comparison between a survey control-group and survey of project beneficiaries to infer quantifiable changes in situation. In addition, we used the survey as well as more qualitative focus groups and interviews to try and develop the causal story behind the changes we identified.

At the same time, given this approach, in consultation with the project team, we decided that using our preferred methodology would only allow for evaluation work where the benefits could be identified by a survey of direct recipients. For this reason, the information component, the food safety component and the disaster risk reduction component were not covered by our study.

The methodology for this study consisted of the four parts:

- 1) Desk research
  - a. an overview of project activities, which included interviews with project staff and review of project documents
  - b. a review of existing research material on the sector and region to evaluate the situational analysis of the project team
- 2) a qualitative analysis, which included in-depth interviews with project intermediaries in the field, project beneficiaries, and focus groups with project beneficiaries
- 3) a short phone survey with project participants to aid the main survey development
- 4) field survey of project beneficiaries and non-beneficiaries

## Overview of project activities and related desk research

To gain a good understanding of the project, our team conducted in depth interviews with Mercy Corps project management and staff in Tbilisi and project managers in the field. We also reviewed the existing M&E database, the project's annual reports and a wide range of supplementary studies that Mercy Corps has conducted under this project.

This analysis served three roles. First, it gave us a clearer understanding of the operation of the project. Second, it helped us to understand the situation on the ground and the context for our interviews and focus groups. Finally, and most importantly, it helped us to understand the causal chain that underpins the logic of Mercy Corp's project. Understanding this chain is essential for testing Mercy Corps hypotheses about the impact of their project.

In addition, our research project was intended to go beyond the scope of simple project evaluation in two particular respects. First, the project was supposed to pay particular attention to the 'social' and 'systemic' changes that the project had created.

In looking at the 'social' impact, it was our intention to understand the way that the project had effected quality-of-life and empowerment issues beyond simple financial compensation. In particular, we were interested to see if the project had generated social benefits in terms of improved health and education and to document whether and how it had improved the gender dynamics of the households affected.

In looking for systemic changes, we were looking to see ways in which the project had affected the environment beyond the direct project impact. There are two major forms of systemic change we were interested to look at. First, often characterized as 'copy-cat' behavior, we were interested to see if there were broad ways in which lessons learned by project participants might result in a broad change of activity, outside of the project and outside of the group. Second, we were interested to look for instances of 'crowding in' behavior, where demand, encouraged by the project creates an increased willingness to supply the demand more generally. This might be seen in areas like machinery provision or veterinary services.

## **Qualitative analysis**

In order to gain a textured understanding of Mercy Corps' interventions and their impact on regular farmers in Samtskhe, our team had focus groups and in-depth interviews on the ground. We had five focus groups which covered each of the four directions of Mercy Corps interventions:

- 1) Animal health and veterinary: A focus group with six beneficiaries of a vet pharmacy in the town of Aspindza.
- 2) Nutrition: A focus group with nine beneficiaries of tractor rake/mower in the village of Tkemlana.
- 3) Breeding: A focus group with six beneficiaries of bull replacement in the village of Agara.
- 4) Market Access: A focus group with twelve beneficiaries of a Milk Processor in Chobareti and a focus Group with eleven brokers of the Livestock Market in Akhaltsikhe.

In addition to these five focus groups we also conducted in-depth interview with a key Mercy Corps partners.<sup>2</sup>

These qualitative discussions were crucial for two reasons. First, as they were conducted before the survey, they helped us to develop the survey questionnaire. Second, the open and semi-structured nature of this interaction allowed us to develop a nuanced understanding of the projects. This helped us highlight issues that the project team may not have considered in advance.

## **Quantitative Analysis**

Phone survey with beneficiaries

Following from our focus groups, it became clear that we did not understand enough about the likely impact of the project, or the perception of that impact, to design the field survey. We therefore designed and ran a small phone pilot-survey with 23 recipients of all of the key elements of the project that we wanted to cover.

The aim of conducting the phone survey was to learn about farmers' experiences and views on sales of milk and other agricultural products. We wanted to find out how agricultural transactions take place in the region and what benefits it brings to local farmers, by their own assessment. This preliminary survey, together with our interviews with Mercy Corps staff, also helped us to identify and concentrate on Mercy Corps interventions which seemed to be having measurable impact. As a result of this scrutiny, we took out the livestock market component because we established that the nature of the intervention did not generate results which were significant enough to be

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<sup>2</sup> We spoke to the owners and managers of a milk processor "Mzianeti", the owner of a tractor, the director of the Livestock Market, the Owner/Director of a vet pharmacy store "Rural Advisory Service", a representative of a veterinary products supply company Roki, the Director of the training provider for veterinarians "Momavlis Fermeri" and the Manager of the Akhaltsikhe Machinery Shop.

reported on by the beneficiaries. Such interventions would have very limited impact on systemic behavioral changes.

#### The main field survey

The survey was conducted to provide a set of quantifiable indicators that allowed us to compare the aggregate situation recipients of the Mercy Corps activities and compare their situation to similar families who had not been recipients of the program. We conducted 634 face-to-face interviews with 276 beneficiaries and 358 non-beneficiaries. Overall response rate in the survey was 88%. The distribution of response rates for each group is shown below:

Figure 2: Response rates for each of the survey groups

	Completed interviews	Sample size	Response rate
Beneficiaries	276	342	81%
Non-beneficiaries	358	375	95%

Margin of error for each group is shown below:

Figure 3: Margin of error for each group

Beneficiaries - Male	5.1%
Beneficiaries - Female	4.9%
Non-beneficiaries	3.1%

To identify beneficiaries for the survey we started with a list of all of the project beneficiaries provided by Mercy Corps. We then filtered the list of beneficiaries using three criteria. First, we excluded beneficiaries if the intervention impact couldn't be measured. For example, installing a large screen which shows commodity prices at the livestock market might be very useful for sellers and buyers, but the sellers and buyers we spoke to in our phone interviews often found it extremely hard to identify the nature or the extent of the benefit created.

Second, we excluded project components which had started too recently to plausibly have an impact on the recipient group. People who became beneficiaries since December, 2012, were also excluded because there is little time to show an effect. For the same reason, we focused our analysis on Samtskhe as Mercy Corps started its activities in Javakheti municipalities relatively recently.

The third criterion of exclusion was if it was already acknowledge that the partner organization had failed to deliver the promised results. For example, the cheese storage organization failed to attract the minimal number of customers needed to operate and was in the process of being dealt with by the project, so its customers didn't become Mercy Corps beneficiaries. In addition, some of the providers of artificial insemination didn't make the injections as it was planned so we did not include this beneficiary group.

This filtering left us with 3,606 unique beneficiaries that were affected by the Mercy Corps interventions. From this list, we sampled 342 beneficiaries, and received answers for 276 of them. Figure 4 is the number of interviewed beneficiaries by intervention type and gender.

Figure 4: Interviewed beneficiaries by intervention type and gender<sup>3</sup>

Intervention type	Female	Male	Total
Bull Replacement	1	138	139
Micro-finance	8	0	8
Milk	81	0	81
Slaughterhouse	48	0	48
Total	138	138	276

In addition to the beneficiaries, we also selected a group of non-beneficiaries to interview, to act as a point of comparison. This group was to be treated as our control group.

Identifying a control group population was a challenging task as it was important to ensure that the group was as comparable as possible to the beneficiary group. In order to create the greatest possible comparability, we selected the control-group interviewees using two criteria. First, the control group came from the same set of villages as the beneficiary group of interviewees. This was done because geographic differences between the two groups could have resulted in statistically significant differences between them, even if these differences had nothing to do with the program. Second, we know that the majority of the recipients have between 2 and 5 cows. Therefore, when the interviewers knocked on the door of the non-recipient houses (using a random walk system) they ensured that the household had 2-5 cows. In total, we interviewed 358 non-beneficiaries. Below is the breakdown of interviewed people by municipality.

Figure 5: Interviewed beneficiaries and non-beneficiaries by municipalities

Municipality	Beneficiary	Non-beneficiary	Total
Akhalsikhe	107	168	275
Adigeni	93	114	207
Aspindza	76	76	152
Total	276	358	634

The survey collected information on following topics<sup>4</sup>:

- Demographics: composition of households, age groups
- Agriculture: agricultural inputs and products, markets
- Social issues: education, medical situation
- Financial issues: income, property, relations with banks
- Gender: decision-making process

In the analysis that follows, we have integrated the results of the desk research, the focus groups and the surveys. The results are organized into four main sections. Section 1 looks at the context for the project, providing a brief summary of agriculture in the region, a description of the project target group and a summary of the gender situation. Second, we look at the Alliances project components and main outputs. This gives a brief summary of each project component and a summary of our project-specific overview information.

<sup>3</sup>Although we had the beneficiaries stratified by gender, in 45 cases (16% of all beneficiary interviews) the interviewed person was of different gender other than the stratum i.e. the household was part of "Male beneficiary" stratum and female member was interviewed as the male person could not be contacted. Usually, it's women who spend most of the time at home, while men are out working on the field, or, in case there is nothing to do, hanging out with other men playing backgammon or doing other similar activities. In such observations, we kept the initial gender-based stratum code and didn't change it to the actual respondent sex. The reason why we did so is that the households stratification was based on the gender of the person who was interacting with service-providers and this person could have been the most economically active member of the family, so we might look at "economically female supported HHS" vs "economically male supported HHS" instead of female vs male respondents.

<sup>4</sup> The survey questionnaire is included in Appendix 2.

Neither the background nor the project overview were central to our research, but are necessary for context. In addition, the survey and focus groups did provide us with additional clarification on many specific components of the overall situation which may prove useful for the project staff moving forward.

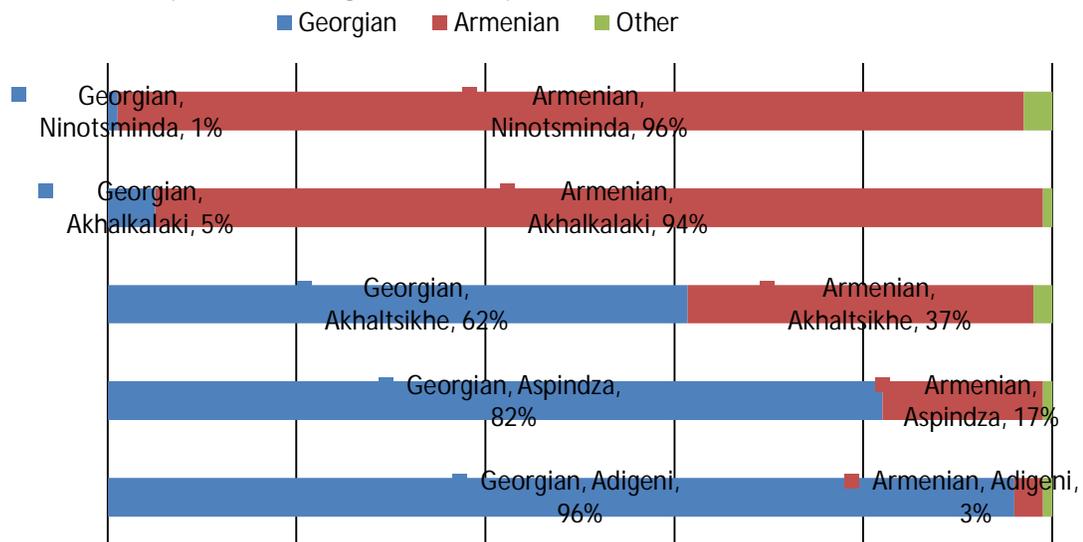
The third and fourth sections of this report are the most directly respond to the requirement of this research project. Section 3 looks at core market improvements and the overall positive economic and productive impact on the beneficiary groups. Section 4 looks at the behavioral changes in the market, decision making, education and healthcare sectors.

# 1 Background

## 1.1 Agriculture in the Samtskhe-Javakheti region

Samtskhe-Javakheti is a strongly agricultural region. In the last few years, the share of agriculture in regional GDP has fluctuated between 30% and 40%.<sup>5</sup> This is a higher share than in any other region of Georgian. The region has been particularly notable for its strong dairy production, especially on the Javakheti highlands, where summer pastures are well-suited to grazing. The region is also famous for producing cheese, either through direct production or through its contribution of milk to larger producers from outside the region. Two-thirds of Georgia's potatoes also come from the region because the climate ensures higher yields than other regions of the country. Another historically strong agricultural sector has been animal husbandry, particularly cattle. 12% of the country's total meat production comes from Samtskhe-Javakheti.<sup>6</sup> 70% of Georgia's carrot production and approximately 20% of its garlic, apple, and plum production also come from this region.<sup>7</sup>

Figure 6: Ethnic composition of targeted municipalities in Samtskhe-Javakheti, 2002 census results



Samtskhe-Javakheti is ethnically mixed. While the two municipalities in the Javakheti region, Akhalkalaki and Ninotsminda are pre-dominantly Armenian, the Samtskhe part, made up of Adigeni and Aspindza are mostly Georgian. The administrative center of the region, Akhhaltsikhe is roughly 2/3 ethnically Georgian and 1/3 ethnically Armenian.

<sup>5</sup> Geostat Database. Regional GDP by Activities, 2006-2010.

<sup>6</sup> Geostat, Agricultural and Environmental Statistics division

<sup>7</sup> USAID Georgia (2011) "Analytical Foundations Assessment – Agriculture (Rural Productivity), Final Sector Report" p 27

As a result of this composition, it is not surprising that since the project has generally focused on Samtskhe (Akhaltzikhe Aspindza and Adigeni), its core of recipients are currently predominantly ethnically Georgian. Now that the project is expanding into Javakheti (Akhalkalaki and Ninotsminda) one would expect the recipient group to include far more ethnic Armenians.

## 1.2 Profile of a farmers in targeted municipalities

Mercy Corps' project is targeting rural households with one to five head of milking cow. Typically, these households have less than a hectare of land where they grow potatoes, corn, wheat, cabbages and other types of vegetables. In our survey, respondents had 0.6 hectares on average. Beneficiaries had slightly bigger land plots than non-beneficiaries.

The table below gives a general indication of the structure of agricultural activity.

Figure 7: What agricultural or farming activity is your household currently involved in?

	Beneficiary	Non-Beneficiary	Total
Milk and dairy products	79%	86%	83%
Meat production	12%	15%	14%
Fruits and vegetables	97%	97%	97%
Total number of respondents	276	358	634

As one can see the beneficiaries and non-beneficiaries have a similar profile of different agricultural activities, with almost all of them engaged in dairy and fruit and vegetable production.<sup>8</sup>

Most farming activity takes place from April to November. Farmers start their day early in the morning. A typical day would involve getting up from 6-7am, with the men feeding the cows, and the women milking them. The men will then often take their cows to a shepherd, who will guard them as they graze in a nearby forest or a mountainous pasture. During the daytime, men focus on working in the field, mainly plowing and planting activities in the spring or harvesting in the fall. A focus group participant described the average day saying that women take care of the activities "at home and a yard," such as cleaning the house, cooking, feeding chicken, and looking after the yard. In the evening, cows are brought to the barn, and women milk them.

According to one focus group respondent, the actual profile of work during the summer depends a great deal on the exact crop. As they say,

In Akhalkalaki, people usually have potatoes, so it's easy to organize work. They often work together and are therefore more efficient than us. Here we have different kinds of plants, not only potatoes. So there is work for us all the time, and very little time to rest (Aspindza Focus Group, female).

Outside of subsistence farming, economic activity in the villages is extremely limited. One participant from the Agara Focus Group highlighted the low level of economic activity,

In the last five years or so, there has not been constructed a single house in our village, not one. This shows that there is a big crisis in villages. People used to build houses even during hardships (Agara Focus Group, male).

The main source of monetary income for a farmer comes from the sale of agricultural products and from pensions.<sup>9</sup> There is an extremely low level of formal paid employment.

<sup>8</sup> The fact that non-beneficiaries have a slightly higher rate of 'milk and dairy production' is not surprising, as this was one of the criteria used to select non-beneficiary interviewees.

<sup>9</sup> Detailed information on the income generated by milk, cheese, meat and potato sales can be found in section 3.

As our survey provided a representative sample of the recipient households, we can use the results to give us a picture of household composition.

Figure 8: Average age and household size in targeted communities

	Beneficiary	Non-Beneficiary	Total
Average household size	4.7	4.4	4.6

Figure 9: Break-down of households with members over 60 years

Number of household members over 60	Beneficiary	Non-beneficiary	Total
None	41%	42%	42%
One	37%	34%	36%
Two	20%	22%	21%
Three or more	1%	1%	1%
Total number of respondents <sup>10</sup>	276	358	634

As one can see most households have 4-5 members and around 60% have at least one pensioner. It is worth noting that this high level of cross-generational living may be a significant advantage to some families. Given the low level of salaried employment, a pensioner in the household may be a significant contributor to net cash income. For this reason, households with a pensioner have a lower instance of poverty than those without.<sup>11</sup>

We can also look at the target family education level.

<sup>10</sup> For each table, we provide the total number of respondents who answered the question. This is done because in some instances there was a skip pattern, so not all questions were asked for everybody. For example, if somebody said that s/he didn't own a cow, we wouldn't ask what a daily milk yield was.

<sup>11</sup> UNICEF Georgia and University of York (2010), 'How Do Georgian Children and their Families Cope with the Impact of the Financial Crisis', Tbilisi, Georgia, p22

Figure 10: Level of education of a farmer

	Beneficiary	Non-beneficiary	Total
No formal education	0%	1%	0%
Elementary school (1-4 classes)	1%	1%	1%
Incomplete secondary (5-9 classes)	7%	5%	6%
Secondary (10-12 classes, lyceum, gymnasium)	44%	41%	43%
Technical education/Vocational	31%	32%	32%
Higher education / Bachelor's degree / Master's degree	16%	18%	18%
Don't know	1%	1%	1%
Total number of respondents	276	358	634

As one can see, there is no significant difference between the two groups. Almost everyone has, at least, secondary education. Around half have tertiary education, and out of those with tertiary education there are about twice as many people with vocational education as university education.

Figure 11: Ethnic composition of targeted municipalities

	Beneficiary	Non-beneficiary	Total
Georgian	88.0%	83.0%	85.2%
Armenian	11.2%	16.8%	14.4%
Russian	0.4%	0.0%	0.2%
Ukrainian	0.4%	0.0%	0.2%
Greek	0.0%	0.3%	0.2%
Total number of respondents	276	358	634

The project is predominantly working with ethnic Georgians. This may initially seem surprising, as the region is often thought of as predominantly Armenian. However, not only does the project work in Samtskhe, which is far more Georgian than Javakheti, it is also concentrated in the more Georgian municipalities of Samtskhe.

## 1.3 Gender issues in the region

### 1.3.1 Power and decision-making in a household

As in other regions of Georgia, households in Samtskhe-Javakheti are fairly traditional in their attitude to gender roles. This means that men are usually considered to be the heads of the household. In practical terms while formally men are generally considered ultimately responsible for the "important" or "big" decisions, these are usual subject to discussion in the household and are seen as family decisions. Also, women usually take responsibility for managing the day-to-day budget, which makes them key to prosperity and development of a household.

My husband wouldn't know what food we have for dinner or what clothes I've bought for a child. When it comes to small, everyday decisions, then it's us [women] who make such decisions" (Tkemlana Focus Group, female).

This is important as big decision, such as buying machinery equipment, are rare, while everyday small economic decisions, such as buying food for children need to be made constantly.

Another impact of the traditional gender roles is that women are more bound to household than men. Accordingly, they are more actively involved in those activities, which are close to the household. This includes sale or bartering of agricultural products/processed goods from the home. Selling/bartering from home is not strictly assigned to women, however in many cases women appear to take responsibility for these smaller transactions. Men, meanwhile, take the lead in larger transactions, such as the sale of meat and cattle.

### **1.3.2 Division of work**

Our study has detected similar patterns as was identified by Mercy Corps 2011 study on gender.<sup>12</sup> In terms of activities, women are generally responsible for everyday housework such as cleaning, washing, preparing meals and looking after elderly and children. In addition, they are responsible for much of the day-to-day agricultural activities like milking the cow, weeding as well as the processing of agricultural products, most importantly making cheese but also making jams pickles, canned goods and preserves for the winter.

Finally, women are often assigned additional tasks in their households. For example, people in villages help their children in studies. This puts more pressure on women's time.

We don't have much free time left for ourselves; there is always something to do at home. But when you have three children to raise, then of course, you have to find the time no matter what other tasks you have at home (Tkemlana Focus Group, female).

Traditionally male tasks are usually those that require physical strength, technical knowledge or travel outside the household. This means that not only driving cars/agricultural machinery but even negotiating with tractor drivers is generally considered man's work. In other words, public sphere seems predominantly male dominated and gender-segregated.

In general, women are assigned to jobs, which are time consuming and physically demanding, while men are responsible for heavy manual jobs. For example, women are the main workforce to collect the potato harvest. The work involves staying in the field during the whole day and collecting potatoes, while men work as loaders, collecting sacks and loading them on the truck.

This division of labor is not absolute and many people we spoke to emphasized that generally the family pulls together to get work done. However, even in these circumstances, it is accepted that women have additional tasks

Men and women are equal here. We often need to help each other, there is no clear division between men and women ... except that, in addition to regular work, women also perform household activities (Tkemlana Focus Group, female)

Women have more things to do than men. If it's a rainy day, or not a season for work, men can relax, drink with neighbors or play backgammon. For women, there is always something to do at home: children need to be taken care or house needs to be cleaned. (Chobareti Focus Group, male).

Therefore, while there is some flexibility in gender roles the flexibility of the work assignment seems to favor men over women. For example, while women are often called on to do work that requires considerable strength

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<sup>12</sup>Mercy Corps (2011) "Gender Analysis of the SDC - funded and the Mercy Corps - implemented 'Market Alliances against Poverty' Programme Area" p.3

of physical endurance, men are almost never expected to help out in everyday housework, do dishes, cook or look after children.

### 1.3.3 Finances

In finances, as in the rest of the gender dynamic in Georgian households, men are formerly in charge. However, women often have more influence than it initially appears. This happens for three main reasons. First, major decisions are usually made jointly, even though the last word is still formerly left to men. Second, women are responsible for day-to-day expenditure and often act as the manager of household finances and therefore practically manage and allocate far more of the household budget than the occasional large purchases for which men are more responsible. Third in our focus group discussions women often mentioned their responsibility in managing household spending and saving.

Men are usually out, working, trying to earn cash. But they are not very good at spending the money in the right way. The money will quickly disappear in men's hand, if left with them long enough. So, usually men turn in their salaries to us, and we save them" (Chobareti Focus Group, female).

It might often be the case that men don't know how much money we have. We don't use the saving unless it's necessary. And women know much better than men what does the family need. But when men need the money, of course we give it to them" (Tkemlana Focus Group, Female).

## 2 Project components and outputs

Mercy Corps' Alliances against Poverty project started operations in Samtskhe-Javakheti in 2008. Most of the first year was spent conducting context analysis in order to finalise project design so most activities did not start until the end of 2008 or the beginning of 2009. The project was extended for three years in 2011.

The goal of the project is "To contribute to poverty alleviation and the transition to a durable market economy for the livestock sector in the Samtskhe-Javakhetiregion of Georgia".<sup>13</sup>The projects uses an M4P approach. This means that the project focuses on trying to alleviate short-term market failures in order to ensure sustainable, market-driven solutions. This model of development work is particularly inclined to work with market-based intermediaries to try and develop input markets, technical services provision and output aggregation, as these intermediaries will continue to operate after the project is finished.

For the purposes of measuring the impact of Mercy Corps' activities, we specifically looked at four directions (outputs) of their interventions. One of these components includes several 'demand side' elements, while the other three are intended to improve production and, so, can be seen as 'supply side'.

#### Demand side

- 1) Market Access: this includes most of Mercy Corps activities including work with milk collection centers and milk processors/cheese factories to improve the milk processing value chain. It also includes work with the livestock market, to farmers' knowledge about market prices and decrease informational asymmetries and work with GA capital to improve credit provision.

#### Supply side

- 2) Animal Health and Vet: This mostly includes cooperation with Roki drugs store and its partners for delivering veterinary products and expertise in the region.
- 3) Nutrition: The nutrition component focuses on support to allow farmers to obtain rakes and mowers for improving hay quality. This component is the intended to improve the nutrition of animals.
- 4) Breeding: this includes bull replacement and artificial insemination. Our analysis only considered the bull replacement project as the Mercy Corps team acknowledge that the AI project did not achieve its objectives.

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<sup>13</sup> Mercy Corps Alliances Project Logframe.

## 2.1 Market Access

The market access component of the Alliances program works with milk collection centers and milk processors to increase the sale of fresh milk, works with a slaughterhouse to increase avenues for selling meat and works with GA Capital to increase credits.<sup>14</sup>The beneficiaries are clients of these intermediaries.

Figure 12: Number of beneficiaries of the Market Access component by types of interventions in Samtskhe as of January 1, 2013

Slaughterhouse	646
Milk	435
Micro-finance	42
Total	1123

Figure 13: Number of beneficiaries of the Market Access component by municipalities of Samtskhe as of January 1, 2013

Aspindza	781 <sup>15</sup>
Akhaltzikhe	208
Adigeni	134
Total	1123

The largest group of recipients are the customers of the slaughterhouse. Mercy Corps' intervention has been to provide one large truck and one small truck to the slaughterhouse so that it can serve the farmers in villages. It is a valuable addition to the already existing system of transportation at the slaughterhouse. While the slaughterhouse is located in Aspindza, it maintains a network of 30 contact people across the region. Farmers can take their cattle to these people, have them weighed and agree on a price. If the agreement is reached, then the slaughterhouse will send a truck to pick up the animal and pay the farmer. The animal is then slaughtered and either sold as meat or processed at the slaughterhouse factory. This provides the farmer with a guaranteed route for selling his cattle if he wants it.

The second largest group of recipients are the families who sell milk to the milk collection centers. In Samtskhe, Mercy Corps cooperates with one milk collection center and four milk processors. Milk processors and MCCs can apply for grants from Mercy Corps to improve or expand their activities. Mercy Corps covers an average of 50% of the total cost. Assistance can include:

- Co-investing in infrastructure rehabilitation. For example, renovation works of factory buildings to meet safety standards;
- Co-investing in equipment. For example, purchases of refrigerators, lacto-scans and other necessary equipment;
- Facilitating improvements in transport linkages in milk supply chain. For example, purchasing insulated trucks.

Mercy Corps has also assisted a local micro-finance organization in Aspindza called GA Capital. Mercy Corps provided funds which were matched by GA Capital to give 16% loans to farmers. Usually, interest rates for loans had been around 36-38%. Cheap loans aimed to help farmers return to agricultural activity after the region had suffered from severe hail.

## 2.2 Supply side

The supply-side interventions start from the knowledge that the meat and dairy sector is generally extremely unproductive. This is most obvious in the low-milk yields of dairy cows, but can also be seen in the long period

<sup>14</sup>This component also includes work with a livestock market that, as we have already mentioned, was not included in our survey and so will not be discussed here.

<sup>15</sup>Aspindza has most beneficiaries because the slaughterhouse and GA Capital are located in this municipality.

of time and low final weight of beef cattle. The low milk yield issue was confirmed as a major concern in our focus groups,

Milk yield is very low around here. Usually, we get 6-8 liters a day from a cow. Some cows can't even do that. Normally, it should about 10 liters a day (Chobareti Focus Group, female).

The Alliances program tries to improve the situation by looking at animal health, nutrition and breeding.

## 2.2.1 Animal Health and Vet

Animal disease is a systemic problem in the region. Outs-breaks of foot-and-mouth and other diseases are relatively common, killing animals and/or dramatically decreasing their milking yield and weight. Farmers often don't know what inoculations to give them, how to detect diseases in the early stages or how to treat them if they find them.

The problem with animal disease is exacerbated by lack of veterinary knowledge in the region. According to the separate Mercy Corps report, veterinaries are usually people who practiced in the field during the Soviet period, with very limited understanding of modern veterinary developments.<sup>16</sup>

This animal health intervention aims to increase access to veterinary drugs for the targeted population and to increase the veterinary knowledge among local vets. To achieve this goal, Mercy Corps partners with Roki and "Momavlis Fermeri". Roki is a major supplier of veterinary products in Kakheti, Kvemo Kartli and Samtskhe-Javakheti. They have nine shops across all of the municipalities in Samtskhe-Javakheti, except Borjomi. Roki has been cooperating with local veterinary shops for the last two years. However, the cooperation has intensified since Mercy Corps' intervention in December, 2012. Momavlis Fermeri is affiliate organization of Roki, responsible for providing trainings.

Figure 14: Number of beneficiaries of the Animal Health and Vet component by municipalities in Samtskhe as of January 1, 2013

Aspindza	258
Akhaltsikhe	23
Adigeni	22
Total number of beneficiaries	303

To achieve greater access to veterinary products, Mercy Corps has provided a truck to Roki, that is now bringing the veterinary products to the Samtskhe-Javakheti region. Now the stocks of local drugs stores are filled once or twice a week, and the needed medicines can be brought in s shorter period of time. Mercy Corps also has assisted local veterinary shops with computer equipment and furniture. They have also helped set-up an office which and a database system for recording sales of drugs.

At the same time Momavlis Fermeri are cooperating to provide training for three types of people on different subject. To veterinarians they provide training on developments in the field and how to use new treatments. Training for vet-pharmacists teaches them how to records sales in the database and also trains them about the support and information they need to provide when selling certain products. For regular farmers they provide basic training on animal health. For such trainings, "Momavlis Fermeri" prints brochures which are then distributed among trainees.

The head of the agro-information center in Aspindza, Guram Jinchveladze, described what it means in practical terms:

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<sup>16</sup> Mercy Corps (2012) "Overview of Veterinary Services (Demand & Supply) in the Samtskhe-Javakheti region of Georgia" p15

The distribution of the drugs has become better recently [since Roki received a truck for distribution]. What matter for us most of all is that we are bit concerned about the delays and the quality. Roki is a very reliable partner and when we need something, Roki can quickly address our supply issues.

The second aspect of Mercy Corps' intervention is even more important: training vets, veterinary pharmacists and farmers can help to provide different levels of knowledge which have different levels of accessibility and price. A participant from the Aspindza Focus Group said, "When I see that my cow is sick, or behaving strangely, I usually go to a veterinary shop. Sometimes they are able to explain to me what might be the cause, what are the treatments, and how to use the" (Aspindza Focus Group, Female).

## 2.2.2 Nutrition

Animal feed and poor grazing is also often cited as a cause of low productivity. This intervention provides greater access to agricultural equipment, specifically intended to improve the volume and quality of hay that farmers can access. This works by co-financing the purchase of agricultural equipment by farmers who then use the equipment themselves and rent it to others. Farmers from over 70 villages are now using these new machinery units.

Figure 15: Number of beneficiaries of the Nutrition component by municipalities of Samtskhe as of January 1, 2013

Akhaltzikhe	1205
Adigeni	420
Aspindza	183
Total number of beneficiaries	1808

Mercy Corps takes proposals from tractors owners on what kind of agricultural equipment is needed and evaluates them. Then they request the equipment from a machinery shop, which imports it from Italy, Turkey and Eastern Europe.

This equipment helps farmers to produce better quality hay. In our focus group with beneficiaries of this component, farmers pointed out the merits of machinery:

It's better to use mowing and raking machinery than doing everything manually. When you mow manually, then you have to make a hay-stack, while a machine does it very quickly. Baled hay also takes up much less space than a manual stack. It's also easier for transporting. Manually assembled hay-stack will lose about 10% during transportation. When stack is put up manually, it always breaks down and hay loses its value. Its grains and leaves should not be exposed to the elements in order to preserve nutritional value (Tkemlana Focus Group, male).

Mercy Corps conducted a separate study on the impact of the timely hayed grass on the live gain weight for cattle. They found that cattle which were fed with quality hay gained from 2.5 to 3.8 kilos per week, while cattle fed with late-hayed grass gained only 1.8-2 kilos per week.<sup>17</sup>

## 2.2.3 Breeding<sup>18</sup>

Cows in Samtskhe are made up of a fairly chaotic mix of different breeds that have suffered from a lack of good new genetics in recent years. As a resulted they are small and their milk production is low. Bulls from Javakheti often weigh 50% more and have better genetics that the bulls in Samtskhe.

<sup>17</sup> Mercy Corps internal document (2012) "Hay Quality Productivity Research Results" p1

<sup>18</sup> As explained earlier, we only focus on measurable interventions. For this reason, *Breeding* in this document includes only the *Bull replacement* component, not *Artificial Insemination*

To improve the genetics of the Samtskhe cattle, in 2010 Mercy Corps started to assist local farmers purchasing high quality breeding bulls from Javakheti. At this time, they have assisted in the purchase of 40 bulls. The price for a good bull in Javakheti ranges between GEL 1,500 and 2,000. Mercy Corps usually covers about 30-50% of the costs. One bull is usually enough to inseminate about 40 cows per season.

The beneficiaries of this project are, therefore, the farmers who have hired the bull to inseminate their cows.

Figure 16: Number of beneficiaries of the Bull Replacement component by municipalities of Samtskhe as of January 1, 2013

Adigeni	163
Akhaltzikhe	114
Aspindza	79
Total	356

Both bull owner and recipient benefit from the use of the bull. The cow owner gets better cows and the bull owner gets food provided for the bull. This allows the bull owner to fatten the bull at minimal cost, and after 5yrs when the bull reaches its maximum weight, it can be sold for meat.

In addition, the project has supported an artificial insemination project but owing to difficulties in the program we did not include analysis of this sub-project in our survey (as mentioned in the methodology section).

## 3 Core Market Improvements

### 3.1 Number of cattle and patterns of milk, cheese and milk sales

We looked at the number of cows and the level of milk production.

Figure 17: The average numbers for cows owned and milk produced by a household (mean and median)

	Beneficiary	Non-beneficiary
Mean number of milking cows	3.4	2.3
Milk produced, liters per day (mean)	18.8	12.7
Average yield per-cow	5.5	5.4

One of the major differences between beneficiaries and non-beneficiaries is that the beneficiaries seem to have more milking cows. As a result, on aggregate the daily milk yield is quite a lot higher.

One part of the explanation for this is that the availability of milk collection centers seems to have changed the pattern of milk production/consumption for some farmers.

Figure 18: What best describes the use of the milk produced

	Beneficiary	Non-beneficiary	Total
Mostly consumed in the home	79%	89%	85%
Partially consumed and partially sold for cash	13%	8%	10%
Mostly sold for cash	5%	2%	3%
Partially consumed and partially bartered for goods and services	1%	1%	1%
Don't know	2%	1%	1%

Total number of respondents	226	301	527
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While both groups generally tend to consume most of the milk they produce in the home, more than double the beneficiary group sell some of their milk for cash. In addition, it is reasonable to conclude that this groupsell far more milk, more consistently. Those households which sell milk for cash from the beneficiary group earn, on average GEL 800 in the last year from their sale, while the non-beneficiaries only earned on average GEL 250.

While a relatively small proportion of the households sell milk, around 95% of those who own cows, make cheese at home. The larger number of cows in the beneficiary group also impacts the amount and value of the cheese that the two groups sell.

Figure 19: What best describes the use of the cheese produced

	Beneficiary	Non-beneficiary	Total
Mostly consumed in the home	43%	61%	54%
Partially consumed and partially sold for cash	46%	34%	39%
Mostly sold for cash	8%	3%	5%
Partially consumed and partially bartered for goods and services	1%	1%	1%
Don't know	1%	1%	1%
Total number of respondents	217	295	512

About 54% of beneficiaries either “mostly sells” or “partially sells” the produced cheese, while 37% of non-beneficiaries do the same. This is therefore, still, by far the largest source of income for the two groups. Median income from cheese sales is 25% higher for beneficiaries. From those who said they partially or mostly sold their cheese for cash, beneficiaries sold GEL 500 while non-beneficiaries sold GEL 400.

Figure 20: Which of the following sentences best describes the use of livestock animals when slaughtered

	Beneficiary	Non-beneficiary	Total
Mostly consumed in the home	54%	67%	61%
Mostly sold for cash	6%	7%	7%
Partially consumed and partially sold for cash	8%	5%	7%
Partially consumed and partially bartered for goods and services	0%	0%	0%
Don't know	32%	21%	25%
Total number of respondents	230	307	537

The number who sell the meat that is produced from slaughtered animals is also fairly low, though, again, beneficiaries do better. The beneficiary group who sell some of their meat each year, make 600 GEL on average from the sale, while the non-beneficiaries make GEL 500.

It is interesting to note that this seems to suggest a greater market orientation amongst beneficiaries generally as in crops, which the project does not support, the numbers are also slightly stronger for the beneficiary group. We

first asked farmers what their main crop was. When we asked families what they do with their crops. For 61% of beneficiaries and 66% of non-beneficiaries the main crop that brings income is potatoes. Beans and cabbages fall far behind.

We then asked them what they do with the crop.

Figure 21: Which of the following sentences best describes the use of your most valuable crop

	Beneficiary	Non-beneficiary	Grand Total
Partially consumed and partially sold for cash	57%	50%	53%
Mostly consumed in the home	38%	43%	41%
Mostly sold for cash	3%	5%	4%
Partially consumed and partially bartered for goods and services	1%	1%	1%
Don't know	1%	1%	1%
Total number of respondents	268	346	614

At 60%, the sale of crops is only slightly higher among beneficiaries than non-beneficiaries and beneficiaries derived GEL 600 from the sale rather than non-beneficiaries who gain an average of GEL 500.

### 3.2 Wealth indicators and poverty status

As one would expect, given their slightly higher level of income, the beneficiary group have slightly higher levels of property ownership.

Figure 22: Ownership of property items

	Beneficiaries	Non-Beneficiaries
Color TV	94%	93%
Mobile phone	91%	87%
Refrigerator	60%	57%
Washing machine	53%	51%
Car	43%	40%
Regular oven for cooking	39%	39%
DVD player	33%	32%
PC	23%	23%
Microwave oven	12%	12%
Internet connection	7%	9%
Air conditioner	1%	1%

In addition, as we have shown that cash income from agricultural products is higher across the board, we can also conclude that poverty levels are probably lower. However, beyond that, it is extremely hard to clearly draw any conclusions about the poverty dynamic in both groups.

## 4 Systemic Behavioral Changes

In addition to looking at overall production and income differences, this research project also looked for evidence of systemic behavioral change, in market orientation and production practices as well as in social issues, like decision making, access and use of healthcare and access and use of education.

## 4.1 Changes in approach to the market

The first broad area of systemic behavioral change that the research project identified related to market orientation. Below we will highlight apparent changes, both in the beneficiary group and beyond in both market and production patterns.

### 4.1.1 Orientation towards selling cheese

As has already been shown, about 1/5 of beneficiaries and 1/10 of non-beneficiaries sell milk. However, the focus groups with MCC suppliers offered a number of reasons why selling milk is better and increasingly popular. The reasoning behind this can be broken down into three categories; price, time and convenience and stability.

#### Price

Farmers receive 60 tetri for their milk, most of the time. In late season, they receive 70 tetri. If they had milk in winter, they would be able to sell it for even a higher price. The demand and price for milk doesn't fluctuate from year to year, and farmers have sense of stability. Price for a kilo of cheese at the market is 4.5-5 lari. It takes about 8 liters of milk, or 4.8 GEL worth of milk to produce one kilo of cheese. Therefore, given the other costs, making cheese simply generates a lower return than selling milk.

Our focus group participants clearly understand this point:

Two years ago, when the factory [Mzianeti] started to collect milk, most people preferred not to sell milk and make cheese instead, as this is how we've live so far: making cheese and selling on the market. But then we saw that selling milk, right from our farm-gate, was more beneficial for us and now most people here prefer to sell milk (Chobareti Focus Group, female).

The price for a kilo of cheese in the [Akhaltzikhe] market is between 4-5 lari. It takes about 8 liters of milk to make one kilo of cheese... and plus there are also other costs, such as salt, pepsin, gas. So, on balance it's better to sell milk (Chobareti Focus Group, female).

Two years ago I was not selling milk. I have four cows and was making cheese to sell the on the market. I paid 120 lari in summer for gas, which was needed to make cheese. Last year I decided to switch to selling milk, and it's really a relief ... with the leftover money I was able to focus better on my land and also prepare more hay for the winter. Before I was able to seed on 0.1 hectares of land, now I can work on 0.15 hectares (Chobareti Focus Group, male).

It costs 5 lari to go to Akhaltzikhe and back. You also pay 2 lari for using the market spot. And you also need to stand there and wait for selling the cheese, or give to a trader for a cheap price. You will need to buy something to eat. All that adds up and it doesn't make sense to make and sell cheese (Chobareti Focus Group, male)

#### Time and convenience

Farmers also pointed out that selling milk saves them time and is more convenient than making cheese. Cheese-making requires about 1.5 hours of attention, and selling it on a market can be another whole day of work.

We don't need to spend time or money on transporting the milk, they come to our houses and pick-up milk themselves (Chobareti Focus Group, female).

It's much easier to sell milk. We don't have to go through the hassle of making, storing, transporting, and selling cheese. They [Mzianeti] come to our houses directly and pick up milk themselves (Chobareti Focus Group, male).

If we make cheese at home, then that day is lost for working in the field. It is 18 kilometers to the place where we collect hay. Usually, we need to walk there, in the mountains, and prepare hay. If I have to make cheese at home, then I can't go making hay (Chobareti Focus Group, male).

## Stability

It was very important for farmers to be confident in the stability of demand and price for their milk. Since Mzianeti started its operations about two years ago, demand and price for milk has been stable. The business has been successful and they plan to expand, making farmers more certain about the demand for their milk. Because of this stability and an opportunity for a relatively steady income, the number of farmers selling their milk increased. Moreover, people bought additional cows to capitalize on this opportunity. It is also important for farmers that they often can ask for advance money when they are in need.

I used to have four cows and was able to save up some money after I started selling milk. When I need money, they [Mzianeti] also given them in advance. So I was able to buy two more cows and am selling more milk now” (Chobareti Focus Group, male).

### 4.1.2 Milk collection and investing in cattle outside the beneficiary group

In villages where there was no milk collection center, many farmers expressed their desire to have such center, where they would be able to sell milk. Many farmers believe that external assistance would be very helpful to set these up. However, there also seem to be individual, independent ventures which started to operate recently without support. In one of our [not dairy related] focus-group meetings a participant mentioned a job offer at a Milk Collection Center.

I was asked by an old acquaintance who is starting a milk collection center in Uraveli ... It seems like a good business. He offered me to collect milk for him in certain villages ... I will see, I think it will be more profitable than trading cows at the livestock market (Livestock Market Focus Group, male).

Similarly, in focus groups, there was a general sense that the evidence of the increasing viability of cattle is leading people to invest more in buying them. In Chobareti, the group talked about beneficiaries buying more cows to supply the milk, now that they know there is stable demand.

Many people in the village saw the benefit of selling milk and now they are adding one or two cows, if they can. People see that the business is stable and they [Mzianeti] would buy more milk, if had it (Chobareti Focus Group, female).

But this is a broader phenomena as well. While it is hard to attribute a clear causal connection to the program, it is clear that generally speaking the number of cattle held by farmers is increasing.

Figure 23: Has the number of livestock animals you own increased, stayed the same, or decreased during the last 12 months

	Beneficiary	Non-beneficiary	Total
Increased	25%	30%	28%
Stayed the same	53%	52%	52%
Decreased	6%	1%	3%
Don't know	16%	17%	17%
Total number of respondents	228	304	532

With 28% of households, overall, saying that their livestock have increased in number and only 3% saying they have decreased, this is a strong upward trend. The fact that it is slightly stronger in non-beneficiaries may simply be a reflection of non-beneficiaries 'catching-up' with the beneficiaries, who we have already shown, have larger herds.

A participant in Chobareti also explained that the ability to sell milk had other knock-on benefits, making the farmer more productive in other ways.

Those who will have many cows, will also have a lot of potatoes and other plants. All these are interrelated – cows need more food, and more food allow better milk yield (ChobaretiFocus Group, male).

### 4.1.3 General attitudes to supply improvements

In order to understand the farmers point of view on the hurdles to supply improvements, we asked them questions about their needs generally and the reasons for low milk yields in particular.

Figure 24: Which of the following would most help you to increase your agricultural productivity generally

	Beneficiary	Non-beneficiary	Grand Total
Agricultural equipment	35%	31%	33%
Seed materials	17%	19%	18%
Access to bank loan	16%	13%	14%
Chemicals	6%	5%	6%
Training in new techniques	5%	3%	4%
Veterinary services	1%	0%	0%
Other	18%	26%	22%
Don't know	3%	3%	3%
Total number of respondents	268	346	614

Figure 25: What is the main reason that you do not have a higher yield?

	Beneficiary	Non-beneficiary	Total
Little available grazing	60%	60%	60%
Bad breeds of cattle	16%	12%	14%
Little animal feed	13%	11%	12%
Non-existence of veterinary services	0%	1%	0%
Veterinary services are expensive	0%	0%	0%
Other (specify)	5%	12%	9%
(Don't know)	5%	5%	5%
Total number of respondents	230	307	537

It is worth noting that there is not a big difference between beneficiaries and non-beneficiaries in answering either of these changes, though they continue to offer interesting insights into the farmers' understanding of their problems.

### 4.1.4 Changes in veterinary care and animal health

As the animal health component only started towards the end of 2012 we would not necessarily expect it to create systematic differences yet. However, our survey did try to identify if there was any difference between the beneficiary group and the non-beneficiary group in terms of attitude to disease, level of disease or level of inoculations.

As one saw in Figure 25, we saw that very few farmers see absence of veterinary facilities as the major factor in their low milk yields.

In our survey around ¼ of both beneficiaries and non-beneficiaries had milking cows with disease in the previous year. The breakdown of the diseases is listed below.

Figure 26: What disease did your milking cows have in the last 12 months?

	Beneficiary	Non-beneficiary	Total
Inflammation	30%	20%	25%
Intestine problems	10%	21%	15%
Trauma	13%	10%	11%
Foot and mouth	6%	12%	9%
Piriplazmoz ("tsieba")	3%	1%	2%
Emzimatosic diseases ("chrichina")	1%	1%	1%
Other	13%	21%	17%
Don't know	24%	15%	20%
Total number of respondents	87	82	169

As one can see the incidence of disease are roughly the same in recipient and non-recipient groups. It is hard to draw strong conclusions from these results as the profile of animal holdings is different in the two groups. Our non-beneficiary groups contain more families that keep cattle but the beneficiary group keep more cattle on average. However, it seems to suggest that the program as a whole has not created a systemic impact on levels of animal disease at this time.

Similarly, the two groups have a similar levels of inoculation.

Figure 27: Which diseases are your cattle are inoculated against?

	Beneficiary	Non-beneficiary
Foot and mouth	77%	80%
Piroplazmoz ("tsieba")	7%	8%
Pastereloz ("kapo")	13%	16%
Emzimatosic diseases ("chirichina")	52%	53%
Other (specify)	18%	14%
The total number of respondents	194	264

Only foot and mouth inoculation is performed regularly and funded by the state, usually twice a year. Other veterinary interventions are performed by the state only if there is an outbreak of a disease. Normally, farmers are supposed to take care of Pasterelos, Piriplazmos and Emzimatosic diseases.

According to a separate Mercy Corps study, "In the last two years, there was a serious outbreak of foot and mouth, anthrax and piroplasmosis in cattle where the government played a minor role in conducting vaccinations against FMD. No organised measures were taken by the government or the private sector against the other diseases. Cattle are not checked prior to sales and no according certificate is issued."<sup>19</sup>

Finally, expenditure by the two groups on veterinary services, at an average of 20 GEL per year is also the same across beneficiary and non-beneficiary groups.

Altogether, this is interesting because it shows that even though the beneficiary group has higher income, has increased the number of cows they hold and the milk yield of those cows, this has not resulted in a broad impact

<sup>19</sup> Mercy Corps (2012) "Overview of Veterinary Services (Demand & Supply) in the Samtskhe-Javakheti region of Georgia" p15

on attitude or behavior towards animal health. The health aspect of the project that started at the end of 2012 may well be a good mechanism for correcting this weakness. But it also shows that the issue should remain a programmatic focus moving forward.

#### **4.1.5 Genetics and animal improvements**

Bad breeding is the second most cited reason for low milk yields and, as such is seen as a priority by farmers in both beneficiary and non-beneficiary groups. Mercy Corps conducted its own study of 45 cows, divided into three breed categories. The first group consisted of local breed cows from Akhaltsikhe, Aspindza and Adigeni while the second and the third groups consisted of local and improved breed cows from Akhalkalaki and Ninotsminda. The differences in terms of milk yield were quite significant: "local breed cows from Akhaltsikhe have milk yield of 9.3 liters per day whereas average milk yield for groups 2 and 3 are 11.6 and 14.3 respectively."<sup>20</sup>

The bull-buying initiative is intended to help correct this by bringing better breeds from Javakheti to Samtskhe. Under the project there have been over 40 bulls brought to Samtskhe, and each bull is normally enough for about 50 cows.

Though it is hard to quantify the benefit from this project through the survey, the focus groups seem to support the benefits to the village and the owner. For the village, they even suggest that there is some potential for scaling-up.

There is no monetary income in having such bulls in the short run. But it's good for the village. One bull is not enough for a village. Here we have about 250 cows in total, so another three or four bulls would be good for the village (Agara Focus Group, Male).

For the bull owner, the benefit comes from the cheap fattening of an animal that can be sold later.

It's true that bulls don't bring income in the beginning, but the costs of sustaining it are low, because other farmers [whose cows have been copulated] often breed feed. And the bull gains weight after three or four years, and it will be profitable to sell as a live meat (Agara Focus Group, Male).

These bulls are bought usually 2-3 years old when they are bought. At that time they are still growing. The real profit for a bull owner comes when a bull reaches 5-6 years. At this age, a bull reaches its maximum weight, can be up to 500 kilos.

Mercy Corps is currently undertaking research that suggests that both the bull replacement and the AI projects have created significant outcomes in terms of greater weight and milk-yield of the improved cows. Our research supported that finding and showed that beneficiaries of the bull replacement intervention, i.e. farmers whose cows have been bred with a good bull, are generally satisfied with the results:

It is obvious that the bull is a good thing for the village. Calves from these bulls weigh more, grow faster (Agara Focus Group, Male).

Introducing new breeds is beneficial for the region not only in terms of the direct descendants of a particular bull. More importantly, people seem to start thinking about improving their cattle breeds in general, and have organize copulation in a more structured manner.

Bull replacement was pointed out as one of the success interventions of Mercy Corps, as its results are tangible in short run as well as long turn. In the short run, beneficiaries claim that born calves weigh significantly more, 30-50% compared to regular calves. And they also look healthier and grow faster. In the long run, breeds will be improved in the village, which will lead to better milk yield. This, in turn, may attract milk collection centers, as

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<sup>20</sup> Mercy Corps internal study (2012) "Milk Yield and Live Weight Gain of Improved Breed Cattle," p2

there will be more available milk in a village. Focus groups showed that people, in general, are willing to sell their milk, but there is often no milk collection center around. And the ones which are far to not come to a village since there is little milk available for sale.

The market logic for the person who buys a bull is beginning to have an impact outside of the project. Not only were our focus groups generally very positive about the project, one individual was considering buying a bull for himself, as he had seen it work for others.

In this village there are about 250 heads of cows. One bull is enough for about 40-50 heads of cows. So, I'm thinking to also buy a bull. Shengeli [Mercy Corps intermediary] already gave me some advice how to proceed, when to buy, where, and how to choose a good bull (Agara Focus Group, male).

#### **4.1.6 Machinery**

The use of farm machinery for preparing of land or harvesting is 96% among beneficiaries and 92% among non-beneficiaries.

The assistance in purchasing machinery also seems to have encouraged others to start thinking about the logic of doing so. In the first instance, it frees up time and energy, and allows for better planning for farmers. It also gives the farmer greater confidence to plan their other agricultural activities.

Since there is a rake in our village, I feel less worried now. I don't have to worry about finding other villagers and then going to another village for a rake-tractor. I know that I can use a rake whenever I need it (Agara Focus Group, Male).

Having equipment dispersed more widely across villages means that farmers are generally able to use the equipment, even if they don't have the money at the moment. As the owner is in the same village, they probably know the person who uses the equipment and can therefore be confident that they will pay during harvesting time. This gives more flexibility and brings more benefits to a village. A tractor owner from another village will rarely do such favor.

We talked to the largest machinery shop in the region, which is also a partner of Mercy Corps. According to the manager of the machinery shop, they used to sell about 5-6 units of new equipment imported from Turkey or Italy. After they started partnering with Mercy Corps, they sold around 60 pieces of imported equipment, within the framework of the project. But what is even more important, farmers who are not intermediaries of Mercy Corps, started to buy these equipment as well.

Since starting cooperation with Mercy Corps and selling equipment to their partners, we see that overall demand for such products has risen as well. Farmers see that other farmers are now using new and more effective equipment, and then they want to have such equipment too. They come to us and we provide thorough consultation on what exactly they need and how to go about it (Machinery shop manager, Akhaltsikhe).

The new equipment is not only more effective and easier to operate compared to the old ones, but its parts are also available and can be purchased. In contrast, for soviet equipment, if parts break or wear out, they can be very hard to replace.

### **4.2 Improvements in decision making and the situation of women**

There is little evidence that the project has impacted on the role of women in decision making in the household or the broader society. In our survey, men were named as heads of households by 83% of respondents. The

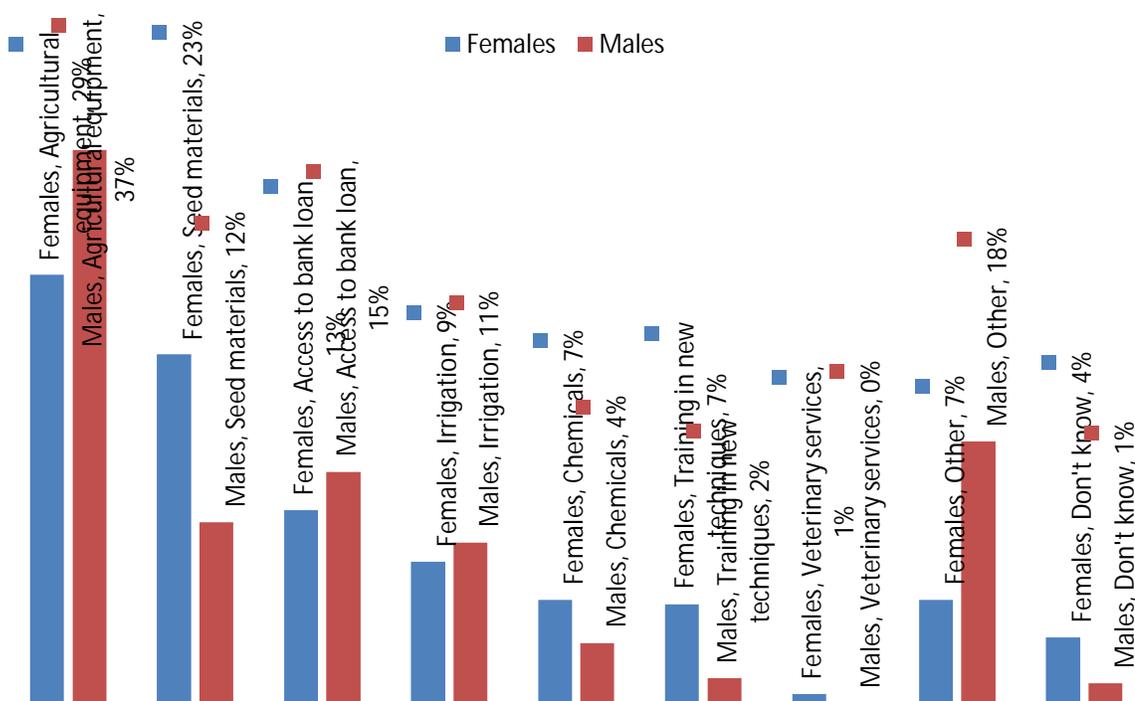
results are similar for beneficiary and non-beneficiary groups. These results are consistent with a 2008 study, which showed that 86% of households were headed by men<sup>21</sup>.

Women are usually only named as the head of a household when men either have migrated, usually to Russia, or are already dead. That said, in 19% of the situation respondents said that women make the principal agricultural decision in the household, which suggests a slightly more even distribution of control.

However, in this discussion earlier, about the situation facing women (section 1.3) it is important to understand that the gender dynamic is not as crude as these figures might otherwise suggest. Women have considerable involvement in most household decision-making and, in some ways, are practically in control of household finances.

However, our survey did also highlight a difference in attitudes to agricultural problems that are interesting for the purposes of project development.

Figure 28: Which of the following would most help you to increase your agricultural productivity generally? Females vs. Males.



Perhaps unsurprisingly, significantly more men cite the need for agricultural equipment. However, women are more likely to believe in the importance of seed and, though demand for training in both groups is relatively low, it is much higher for women than for men.

The one clear area where the project has made the situation better for women is the time saving related to cheese making and the collection of hay. In section 4.1.1 we have already reviewed the benefits of the time saving from selling milk, not just in terms of cheese making, but also taking the cheese to market and selling it. This saved time is sometimes used for doing more work

We make cheese twice a day, after milking the cows. It takes about 1.5 hours each time. So we can't really use this time for something else, you need constant attention. You might be able to do something else in

<sup>21</sup>Sumbadze, Nana and George Tarkhan-Mouravi (2005) "Gender & Society in Samtskhe-Javakheti, Georgia". Occasional Papers in Public Administration and Public Policy. VI:4. Pg 26.

the kitchen, but you won't be able to leave the house and work in the field while making cheese. (Chobareti Focus Group, female).

If we need to be doing something in the field, we are not rushed anymore, we can take our time as we don't have to make cheese (Chobareti Focus Group, female).

Sometimes it is used for recreation, though options are limited.

For a woman, there is always something to do in a house. We don't really have much free time. If everything is taken care of, then we might watch TV or drink coffee with neighbors (Chobareti Focus Group, female).

We don't have much time and opportunities for recreation here. On Sundays, If I have time, I usually go to a church (Chobareti Focus Group, female).

It can also be used to help children with school-work, which is also generally considered 'womens work'.

We don't have much free time left for ourselves; there is always something to do at home. But when you have three children to raise, then of course, you have to find the time no matter what other tasks you have at home (Tkemlana Focus Group, female).

### 4.3 Access to Education

One of the aims of the project was to look at whether the project had a broader impact on social behavior, particularly the access to and use of education and healthcare. In both of these instances, the first simplest point to make is that we can easily infer that spending will be higher, as we know that incomes are higher and we know that Georgians, on average, spend a great deal on these two services.

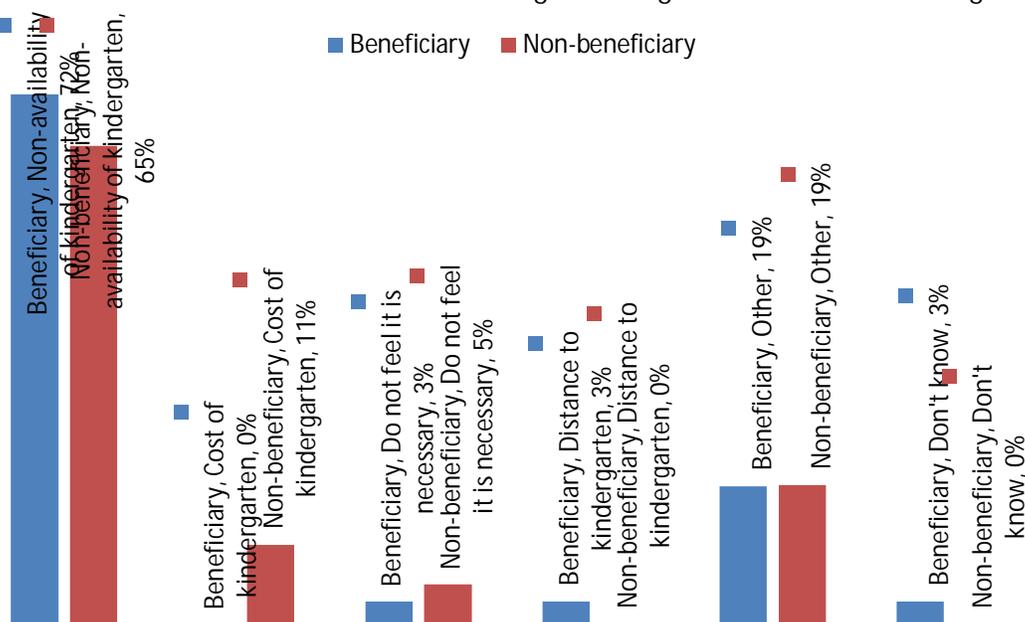
However, on top of that, we asked the two groups about their provision their needs, their utilization and their challenges in these areas.

Figure 29: Children attendance of kindergarten

	Beneficiary	Non-beneficiary	Total
Households with children at kindergarten	7%	8%	8%
Households where children do not attend kindergarten	12%	11%	11%
Total number of respondents	276	358	634

Essentially, the same number of people in both groups don't take their children to kindergarten.

Figure 30: What are the reasons for not attending a kindergarten for children of its age



However, from the 32 beneficiary families and 37 non-beneficiary families who said that their children don't attend a kindergarten despite being the right age, none of the beneficiary group said that this was a matter of cost. The overwhelming majority said that if they did not attend it was the result of non-availability.

About 32% of the interviewed beneficiary households and 42% of non-beneficiary households include children that go to school. Median expenditure on schoolbooks for both beneficiaries and non-beneficiaries is GEL 150. Mean is not far from the median – GEL 171 for beneficiaries and GEL 168 for non-beneficiaries.

However, the beneficiary group spend a lot more money on tutors for their children than the non-beneficiary group. About 16% of beneficiary households with a school age family member said that they use tutors to catch up in some subjects, and 10% said that they hire tutors to prepare children for university exams. In non-beneficiary households, only 7% use tutors to catch up in some subjects and another 7% use tutors for preparing for university entrance exams.

Oddly, however, this does not translate into higher levels of university attendance. There were 67 beneficiary households and 74 non-beneficiary households with family members of “university age.” Of these, 43% of beneficiary households and 51% of non-beneficiary households send their children to universities. For both groups, the main reason for not attending at a university is the high cost.

We also asked about spending at university.

Figure 31: Annual costs for higher education, median calculations<sup>22</sup>

	Beneficiary	Non-beneficiary
Textbooks/materials	200	200
Tuition	1725	1750
Accommodation	160	0
Transportation	300	200
Total number of respondents	29	38

<sup>22</sup>In this instance we took the median (mid-value) rather than the mean (numerical average) because there were a few instances where the figures given were extremely high, and this would distort the overall result.

As shown in the table above, both groups have similar costs. However, while the percentage of students attending college is slightly lower in beneficiary households, beneficiaries are more likely to finance the university studies out of their existing finances. This, therefore, continues to confirm that this group is more able to send their children to university.

Figure 32: Principal source of financing university studies

	Beneficiary	Non-beneficiary
Own source (without bank loan)	64%	58%
Bank loan	20%	22%
Government grant	8%	8%
Other	8%	11%
Total number of respondents	29	38

However, interestingly, while a slightly smaller number of the children go to university, a higher proportion of beneficiary families are paid for by the households.

#### 4.4 Access to healthcare

In the Alliances target communities medical problems and the cost of medicine are routinely cited as one of the key social problems. People often complain about the absence of facilities. Often, some local former doctor or a nurse performs basic medical checks in the village, such as measuring blood pressure. Such activities are usually free of charge. As one focus group participant explained

Malkhazi's [one of the Focus Group participants] mother helps us in the village. If we have a minor problem, such as a headache or temperature, we go to her and she tells us what to do. (Agara Focus Group, male)

In trying to assess the size and nature of demand we started by simply asking people about usage.

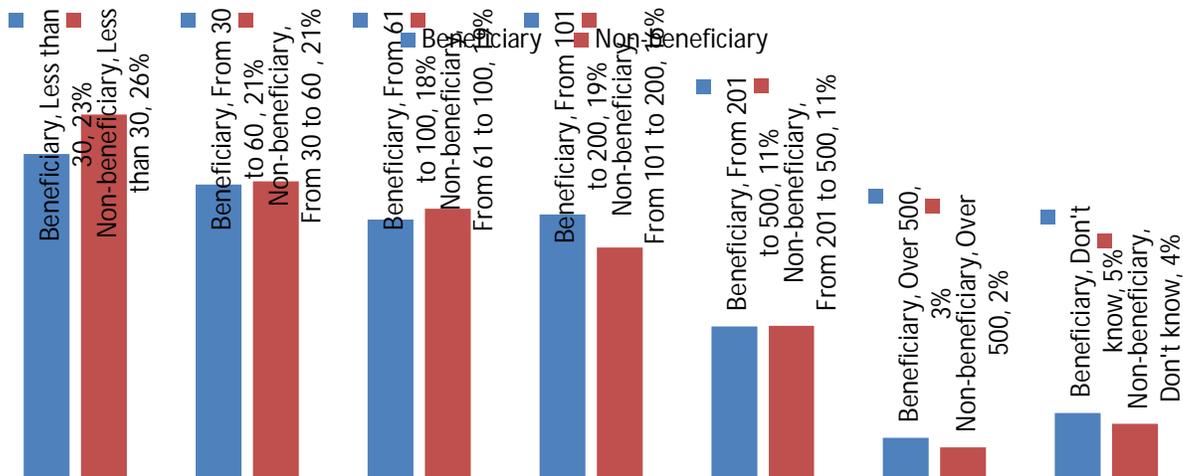
Figure 33: Use of a doctor/medical service, excluding hospitalization, during the last year

Frequency	Beneficiary	Non-beneficiary	Total
Never	25%	27%	26%
Once	11%	13%	12%
Twice	8%	12%	11%
From three to five times	34%	27%	30%
More than five times	19%	18%	18%
Don't know	3%	3%	3%
Total number of respondents	276	358	634

On average, beneficiaries and non-beneficiaries used a medical service around 3.7 times over the last year. The median spending for beneficiaries was around GEL 80 in the last month, while for non-beneficiaries was slightly lower at GEL 70.<sup>23</sup>

<sup>23</sup>Once again, we use the median (mid-point) cost rather than the mean (numerical average) because some of the households had extremely high spending and this seemed to distort the average picture.

Figure 34: Spending categories on medical services/drugs in the last month for beneficiaries and non-beneficiaries, in GEL



As can be seen from the graph, beneficiaries are able to spend more money on medical services than non-beneficiaries.

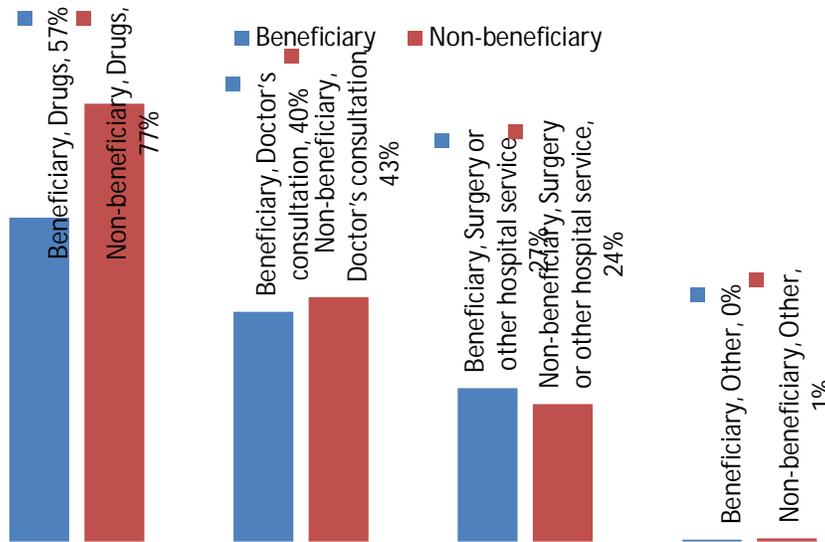
Figure 35: Use of a doctor / medical service cross-tabulated by a presence of an elderly person in a household

	Beneficiary	Non-beneficiary	Total
Household without a member over 60	2.7	3.2	3.0
Household with a member over 60	4.6	4.1	4.3

As one might expect, the level of medical-service use is quite strongly connected to the presence of a pensioner in the household. Households with members over 60 years are generally prone to use doctor/medical services more often than households without such members.

Around 60% of and beneficiaries and non-beneficiaries say that there are medical services or medicines that their family needs, but they can't afford it. Of the 173 beneficiaries and 218 non-beneficiaries who said that they can't afford the needed medical services, the break-down of the needed categories is illustrated in the graph below:

Figure 36: Which of the medical services/medicines are needed but not affordable due to their cost



One category of medical service, where there is a significant difference between beneficiaries and non-beneficiaries seems to be access to medicine. This may be significant, as limited access to medicine is, of course, connected to income and is one of the most common complaints about the limited availability of medical services.

Therefore, in general in terms of systemic impact one can argue that beneficiaries have an increased market orientation, both in that they produce more and they are increasingly interested in moving towards the more efficient sale of milk instead of cheese. That also has knock-on effects in terms of interest outside of the beneficiary group.

The first stages of similar systemic changes can be seen in attitudes to genetics and machinery, though less so in animal health. In the broader social environment, as one would expect, higher income makes income less of a barrier at all levels of education and significant amounts of money are spent on tutoring of secondary school children. Why this does not, yet, translate into higher levels of university attendance deserves further investigation.

In health, the number of doctor visits and the level of complaint about expensive medicines seems to be consistent. But the amount of spending on medicine and the amount of practical concern regarding limited access seems to be lower in the beneficiary group, again suggesting that some of the greater income is spent on improved healthcare.

## Appendix 1: The list of focus groups

Focus group	Number of male participants	Number of female participants	Location	Date
"Mzianeti" Milk Processor	6	6	Chobareti	April 16, 2013
Livestock Market brokers	11	0	Akhaltsikhe	April 17, 2013
Machinery	5	4	Tkemplana	April 18, 2013
Veterinary component	2	4	Aspindza	April 19, 2013
Bull replacement	6	0	Agara	April 20, 2013

# Appendix 2: The Survey Questionnaire

Survey on Socio-Economic Situation in Selected Households in Samtskhe-Javakheti  
May 2013

V1	Type of questionnaire:	1 Beneficiaries 2 Non-beneficiaries (farmers with 1-5 cows)
V2	Settlement code [ONLY IN CASE OF NON-BENEFICIARIES. TO BE FILLED BY INTERVIEWER]	__   __   __   __   __
V3	Household code [ONLY IN CASE OF NON-BENEFICIARIES. TO BE FILLED BY INTERVIEWER]	__   __
V4	Individual code . ONLY IN CASE OF BENEFICIARIES. TO BE FILLED BY INTERVIEWER]	__   __   __   __   __
V5	Interviewer's code [TO BE FILLED BY INTERVIEWER]	__   __   __   __

[INTERVIEWER! Greet the person who opened the door in Georgian. If he/she cannot speak Georgian ask whether or not there is a person in the house who can speak Armenian or Russian. If the household member cannot reply to you and there is no one in the house who speaks Georgian, Armenian or Russian, leave the household, do not include any information about the household in the interviewer form and go to the next household following your household selection instructions.]

[INTERVIEWER! Memorize the following text and address the household member who opened the door.]

Hello. My name is \_\_\_\_\_. I represent GEOWEL research. I would like to ask a few questions on behalf of the humanitarian organization MERCY CORPS. We are conducting a survey about socio-economic situation in Samtskhe-Javakheti. Your household was randomly selected along with several hundreds of other households in Samtskhe-Javakheti. All respondents are kept anonymous and we fully ensure confidentiality of your responses. The whole interview is anticipated to last about 20-25 minutes.

I would like to speak with one adult member of your household who is best aware of household's conditions and activities. If the household member cannot answer any of the questions, he/she can ask other household member(s) for help. Can I talk to this person?

[INTERVIEWER! If the person you were talking to refuses to continue conversation, say good-bye and include respective code in the interviewer form.]

[INTERVIEWER! If the person you were talking to agrees to continue conversation, select the respondent who is best aware of the household's affairs. If the selected person refuses to be interviewed, say good-bye and include respective code in the interviewer form. However, if he/she agrees to be interviewed, repeat the above-written text and start an interview. Write down the date and start time of the interview.]

T1	Date of family interview:	__   __	__   __
----	---------------------------	---------	---------

		Day	Month
T2	Time of family interview: [Use 24 hour format]	__ __  Hour	__ __  Minute

Demographics

D	[Interviewer] Circle respondent's gender]	Male	Female
		1	2

**D2.** Respondent's age

|\_\_|\_\_| years

(Don't know)	98
(Refuse to answer)	99

**D3.** What is the total number of members of your family, including yourself? Under family, we mean persons who live with you in one dwelling and have shared expenditures, regardless of whether they are registered in the same dwelling or not.

[Interviewer!Write down the number.]

|\_\_|\_\_| persons

(Don't know)	98
(Refuse to answer)	99

D3a. Pleasetell me how many persons aged 60 years or older currently live in your family?

[Interviewer!Write down the number. If there are no such members of the family, write down "0"]

|\_\_|\_\_| persons

(Don't know)	98
(Refuse to answer)	99

D3b. And how many persons aged 18 - 59 years old currently live in your family?

[Interviewer!Write down the number. If there are no such members of the family, write down "0"]

|\_\_|\_\_| persons

(Don't know)	98
(Refuse to answer)	99

D3c. And how many persons younger than 18 currently live in your family?

[Interviewer!Write down the number. If there are no such members of the family, write down "0"]

|\_\_|\_\_| persons

(Don't know)	98
(Refuse to answer)	99

**D4. What is your relation to the head of the family?**

[Interviewer!Do not read, apply. Only one answer is possible.]

<i>Self</i>	1
<i>My spouse (wife or husband)</i>	2
<i>My son or daughter</i>	3
<i>My grandchild</i>	4
<i>My daughter in law or son in law</i>	5
<i>My parent (Mother or father)</i>	6
<i>My grandparent</i>	7
<i>My Brother or Sister</i>	8
<i>My Mother in law or father in law</i>	9
<i>My Relative (uncle, aunt, etc.)</i>	10
<i>Not related</i>	11
<i>Other (Specify _____)</i>	12
<i>(Don't know)</i>	98
<i>(Refuse to answer)</i>	99

**D5. What is your level of education?**

[Interviewer!Only one answer is possible.]

No formal education	1
Kindergarten	2
Elementary school (1-4classes)	3
Incomplete secondary (5-9 classes)	4
Secondary (10-12 classes, lyceum, gymnasium)	5
Technical education/Vocational	6
Higher education / Bachelor's degree / Master's degree	7
Advanced higher education	8
<i>(Don't know)</i>	98
<i>(Refuse to answer)</i>	99

**D6. Which of the following ethnic groups best describes you?**

[Interviewer!Do not read, apply. Only one answer is possible.]

<i>Azerbaijani</i>	1
<i>Abkhaz</i>	2
<i>Greek</i>	3
<i>Turkish</i>	4
<i>Ossetian</i>	5
<i>Russian</i>	6
<i>Armenian</i>	7
<i>Ukrainian</i>	8
<i>Georgian</i>	9
<i>Other (specify _____)</i>	10
<i>(Don't know)</i>	98
<i>(Refuse to answer)</i>	99

**D7. What is the main language that you speak at home?**

[Interviewer! Do not read, apply. Only one answer is possible.]

<i>Azerbaijani</i>	1
<i>Abkhaz</i>	2
<i>Turkish</i>	3
<i>Ossetian</i>	4
<i>Russian</i>	5
<i>Armenian</i>	6
<i>Georgian</i>	7
<i>Other (Specify _____)</i>	8
<i>(Don't know)</i>	98
<i>(Refuse to answer)</i>	99

Social Services

**S1. How many times have you or any members of your family used a doctor / medical service, excluding hospitalization, during the last year?**

[Interviewer! Write down the number.]

|\_\_| |\_\_| | |\_\_| |

<i>(Don't know)</i>	98	
<i>(Refuse to answer)</i>	99	

**S2. Are there any medical services or medicines you or any member of your family need but cannot afford due to their cost?**

Yes	1	GO TOS4
No	0	
<i>(Don't know)</i>	98	
<i>(Refuse to answer)</i>	99	

**S3. Which medical service does you or your any member of your family need but cannot afford due to their cost?**

[Interviewer! Do not read, apply. Multiple answers possible.]

<i>Drugs</i>	A
<i>Doctor's consultation</i>	B
<i>Surgery or other hospital service</i>	C
<i>Other (specify _____)</i>	D
<i>(Don't know)</i>	Y
<i>(Refuse to answer)</i>	Z

**S4. Approximately how much did your family spend in the last month on medical services/drugs?**

[Interviewer! Write down the number in GEL.]

|\_\_| |\_\_| | |\_\_| | GEL

<i>(Don't know)</i>	98
<i>(Refuse to answer)</i>	99

S5. How many persons in your family currently attend a kindergarten?

|\_\_|\_\_|[Interviewer! ]

<i>(Don't know)</i>	98
<i>(Refuse to answer)</i>	99

S6. How many children of kindergarten age live in your family who do not attend it?

|\_\_|\_\_|[Interviewer! If 0, GO TO S8]

<i>(Don't know)</i>	98	GO TO S8
<i>(Refuse to answer)</i>	99	

S7. Why do they not attend kindergarten?

[Interviewer! Do not read, apply. Multiple answers possible.]

<i>Distance to kindergarten</i>	A
<i>Cost of kindergarten</i>	B
<i>Non-availability of kindergarten</i>	C
<i>Quality of kindergarten</i>	D
<i>Do not feel it is necessary</i>	E
<i>Other (specify) _____</i>	F
<i>(Don't know)</i>	Y
<i>(Refuse to answer)</i>	Z

S8. How many persons in your family currently get education in school?

|\_\_|\_\_|[Interviewer! If 0, GO TO S12]

<i>(Don't know)</i>	98	GO TO S12
<i>(Refuse to answer)</i>	99	

S9. What is the total cost of school handbooks (in GEL) your children need during this semester?

[Interviewer! Write down the cost]

|\_\_|\_\_|\_\_| GEL

<i>(Don't know)</i>	98
<i>(Refuse to answer)</i>	99

S10. Do you spend money on tutoring for your school-children?

[To interviewer! Multiple answers possible.]

Yes, we hire tutors to prepare for university exams	1	GO TO S12
Yes, we hire tutors to catch up in some subjects	2	
Other (please specify): _____	3	
No	0	
<i>(Don't know)</i>	98	
<i>(Refuse to answer)</i>	99	

S11. What is the annual cost of this tutoring?

[Interviewer! Write down the cost]

|\_\_|\_\_|\_\_| GEL

<i>(Don't know)</i>	98
<i>(Refuse to answer)</i>	99

S12.Are there people in the household of the age to go to a higher educational institution?

Yes	1	GO TOP1
No	0	
<i>(Don't know)</i>	98	
<i>(Refuse to answer)</i>	99	

S13.Does an eligible household member currently go to a higher educational institution?

Yes, oneor several household member goes to a higher educational institution	1	GO TO S15
Somebody does currently attend, but somebody doesn't	2	
No, despite the right age, no household member goes to a higher educational institution	0	
<i>(Don't know)</i>	98	
<i>(Refuse to answer)</i>	99	

S14.What is the reason for your household member not attending a higher educational institution?

[To interviewer!Multiple answers possible.Rank.]

There is no need for higher education for the type of work s/he intends to pursue	1	
We need her/him helping at home	2	
It's too expensive to study in a higher educational institution	3	
Higher educational institutions do not provide quality education	4	
It's hard to get into a university, even if you have enough money	5	
Other (Please specify): _____	6	
<i>(Don't know)</i>	98	
<i>(Refuse to answer)</i>	99	

GO TO P1

S15.What annual costs are involved for the family in terms of higher education?

Item	Sum
Textbooks/materials	
Tuition	
Accommodation	
Transportation	
Other (Please specify): _____	
<i>(Don't know)</i>	98
<i>(Refuse to answer)</i>	99

S16.What is the principal source of funding studies?

[To interviewer!Multiple answers possible.Rank.]

Own source (without bank loan)	
Bank loan	
Government grant	
Other (Please specify): _____	
<i>(Don't know)</i>	98
<i>(Refuse to answer)</i>	99

Property

P1. Please tell me whether your family owns:

		P1			
		Yes	No	(Don't know)	(Refuse to answer)
1	Color TV	1	0	98	99
2	DVD player	1	0	98	99
3	Washing machine	1	0	98	99
4	Refrigerator	1	0	98	99
5	Air conditioner	1	0	98	99
6	Car	1	0	98	99
7	Mobile phone	1	0	98	99
8	Microwave oven	1	0	98	99
9	Regular oven for cooking	1	0	98	99
11	PC	1	0	98	99
12	Internet connection	1	0	98	99

## Agriculture

A1. Please specify the total area your family uses for growing fruits and vegetables?

[Interviewer! Write down the area.]

|\_\_|\_\_| hectares |\_\_|\_\_| "hundredth"

(Don't know)	98
(Refuse to answer)	99

A2. From the list, what agricultural or farming activity is your family currently involved in:

<i>Farming activity</i>	<i>Yes</i>	<i>No</i>
Milk and dairy products	1	0
Meat production	1	0
Fruits and vegetables	1	0
(Don't know)	98	
(Refuse to answer)	99	

A3. What animals do you have in your household at the moment?

[Interviewer! If 0 for cattle, GO TO A26]

		Yes	No	Number	(Don't know)	(Refuse to answer)
1	Cows	1	0		98	99
	Of which – currently milking?	1	0			
2	Bull	1	0		98	99
3	Calf	1	0		98	99
4	Sheep	1	0		98	99
5	Pigs	1	0		98	99
6	Chickens	1	0		98	99
7	Other live animal (specify)	1	0		98	99

A4. Have any of your milking cows been sick in the last 12 months?

Yes	1	GO TO A6
No	0	
(Don't know)	98	
(Refuse to answer)	99	

A5. What disease did your cow have, for how long, and how did you treat it?

Animal	Age of a cow	Sickness	How long	Did it stop milking	Did you use a veterinary	If you used a vet then how much did it cost
1						
2						
3						

A6. What is currently (i.e. in May) a total yield of milk from all of your cows combined? (daily average)

[Interviewer! Write down the amount in liters]

|\_\_|\_\_| Liters

(Don't know)	98
(Refuse to answer)	99

A7. What is the main reason that you do not have a higher yield?

[To interviewer! Multiple answers possible. Rank.]

1	Little available grazing	
2	Little animal feed	
3	Non-existence of veterinary services	
4	Veterinary services are expensive	
5	Bad breeds of cattle	

6	Other (specify)	
98	(Don't know)	
99	(Refuse to answer)	

A8. Do you make/produce milk at home?

Yes	1	
No	0	GO
(Don't know)	98	TO
(Refuse to answer)	99	A16

A9. What best describes the use of the milk produced?

1	Partially consumed and partially sold for cash	
2	Mostly sold for cash	
3	Partially consumed and partially bartered for goods and services	
4	Mostly consumed in the home	GO TO A16
98	(Don't know)	
99	(Refuse to answer)	

A10. Where do you usually sell milk?

1	Barter locally
2	Sell at farm gate for cash
3	Sell at local market for cash
4	Other (please specify: _____)
98	(Don't know)
99	(Refuse to answer)

A11. How much income is made from the sale of milk in an average year?

_____   _____   _____   Lari	
(Don't know)	98
(Refuse to answer)	99

A12. Is there a place which collects milk from your neighborhood?

Yes	1	
No	0	GO TO
(Don't know)	98	A14
(Refuse to answer)	99	

A13. Do you sell milk to the milk collection center?

Yes	1	GO TO
No	0	A16
(Don't know)	98	GO TO
(Refuse to answer)	99	A15

A14. If there was milk collection center buying milk in your neighborhood, would you sell your milk to them?

Yes	1	GO TO
No	0	A16
(Don't know)	98	

(Refuse to answer)	99
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A15. Why don't or wouldn't you sell milk to a milk-collection center? [Interviewer! Up to three answers. Rank]

Cheese usually brings more income	
Leftover from cheese ("Shrati") is essential as pigs' feed	
There is no milk-collection center around to sell milk	
The price for milk at MCCs is too low	
Other (Please specify):	
(Don't know)	98
(Refuse to answer)	99

A16. Do you make/produce cheese at home?

Yes	1	GO TO A20
No	0	
(Don't know)	98	
(Refuse to answer)	99	

A17. What best describes the use of the cheese produced?

1	Partially consumed and partially sold for cash	GO TO A20
2	Mostly sold for cash	
3	Partially consumed and partially bartered for goods and services	
4	Mostly consumed in the home	
98	(Don't know)	
99	(Refuse to answer)	

A18. Where do you usually sell cheese?

1	Barter locally
2	Sell at farm gate for cash
3	Sell at local market for cash
4	Other (please specify: _____)
98	(Don't know)
99	(Refuse to answer)

A19. How much income is made from the sale of cheese in an average year?

|\_\_|\_\_|\_\_| Lari

(Don't know)	98
(Refuse to answer)	99

A20. Are your cattle inoculated against any diseases?

Yes	1	GO TO A21
No	0	
(Don't know)	98	
(Refuse to answer)	99	

A20a. Which disease they are inoculated against and how often [how often is on average for each adult cow]

1	Foot and mouth	
2	Piroplazmoz ("tsieba")	
3	Pastereloz ("kapo")	
4	Emzimatotic diseases ("chirichina")	
5	Other (specify)	

A21. What are the main costs involved in keeping cattle?

<i>Cost</i>	<i>Annual cost (last 12 months)</i>
<i>Veterinary</i>	
<i>Feed</i>	
<i>Other</i>	

A22. Has the number of livestock animals you own increased, stayed the same, or decreased during the last 12 months [Interviewer! Including died and born]?

1	Increased (Specify the number: )
2	Stayed the same
3	Decreased (Specify the number: )
98	(Don't know)
99	(Refuse to answer)

A23. Which of the following sentences best describes the use of livestock animals when slaughtered?

1	Partially consumed and partially sold for cash	
2	Mostly sold for cash	
3	Partially consumed and partially bartered for goods and services	
4	Mostly consumed in the home	GO TO A26
98	(Don't know)	
99	(Refuse to answer)	

A24. Where do you usually sell animal meat?

1	Barter locally
2	Sell at farm gate for cash
3	Sell at local market for cash
4	Other (please specify: _____)
98	(Don't know)
99	(Refuse to answer)

A25. How much income is made from the sales of meat in an average year?

____   ____   ____   Lari	
(Don't know)	98
(Refuse to answer)	99

A26. From the crops that you grow, which bring the most value to your household (for example, potatoes or grapes)? [INTERVIEWER! Up to three answers. Rank]

1	
2	

3	
98	<i>(Don't know)</i>
99	<i>(Refuse to answer)</i>

A27. Which of the following sentences best describes the use of your most valuable crop?

1	Partially consumed and partially sold for cash	
2	Mostly sold for cash	
3	Partially consumed and partially bartered for goods and services	
4	Mostly consumed in the home	GO TO A30
98	<i>(Don't know)</i>	
99	<i>(Refuse to answer)</i>	

A28. Where do you usually sell this crop?

1	Barter locally
2	Sell at farm-gate for cash
3	Sell at local market for cash
4	Other (please specify: _____)
98	<i>(Don't know)</i>
99	<i>(Refuse to answer)</i>

A29. How much income is made from the sale of this crop in an average year?

|\_\_|\_\_|\_\_| Lari

<i>(Don't know)</i>	98
<i>(Refuse to answer)</i>	99

A30. Do you use farm machinery for the preparation of land and/or harvesting?

Yes	1
No	0
<i>(Don't know)</i>	98
<i>(Refuse to answer)</i>	99

A31. Do you produce any other processed food (wine, vodka, jam, churchkhela, etc.)

Yes	1	
No	0	GO TO
<i>(Don't know)</i>	98	A35
<i>(Refuse to answer)</i>	99	

A32. Which of the following sentences best describes the use of the food that you process?

1	Partially consumed and partially sold for cash	
2	Mostly sold for cash	
3	Partially consumed and partially bartered for goods and services	
4	Mostly consumed in the home	GO TO A35
98	<i>(Don't know)</i>	
99	<i>(Refuse to answer)</i>	

A33. Where do you usually sell the processed food?

1	Barter locally
2	Sell at farm-gate for cash

3	Sell at local market for cash
4	Other (please specify: _____)
98	(Don't know)
99	(Refuse to answer)

A34. How much income is made from the sale of processed food in an average year?

\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_| Lari

(Don't know)	98
(Refuse to answer)	99

A35. Which of the following would most help you to increase your agricultural productivity generally?

[Interviewer! Only one answer is possible.]

Agricultural equipment	1
Chemicals	2
Veterinary services	3
Training in new techniques	4
Access to bank loan	5
Seed materials	6
Other (Specify) _____	7
(Don't know)	98
(Refuse to answer)	99

#### Finance

F1. Has your family ever tried to take out a bank-loan in the last 12 months?

Yes	1	GO TO11
No	0	
(Don't know)	98	
(Refuse to answer)	99	

F2. For what have your family tried to take out a bank-loan?

[Interviewer! Do not read, apply. Multiple answers possible.]

Food/clothes/ basic necessities	
Home electronics/computer	
Car/bike/roller	
Agricultural equipment	
Agricultural expenses/purchase	
Education	
Medical care	
House repairs	
Open/expand a small business	
Other (specify) _____	
(Don't know)	98
(Refuse to answer)	99

F3. Were you able to obtain the loan?

Yes	1	GO TO11
No	0	
(Don't know)	98	
(Refuse to answer)	99	

F4. What was the main reason you could not obtain the loan?  
 [Interviewer! Do not read the options. Only one answer is possible.]

<i>Income too low</i>	1
<i>No collateral (assets)</i>	2
<i>Loan too big</i>	3
<i>Other (Specify) _____</i>	4
<i>(Don't know)</i>	98
<i>(Refuse to answer)</i>	99

#### Income

I1. Does your family receive Targeted Social Assistance?

Yes	1
No	0
<i>(Don't know)</i>	98
<i>(Refuse to answer)</i>	99

I2. On average, what is the value of your family's total monthly expenditure?

[Interviewer! Write down the number.]

|\_\_|\_\_|\_\_|\_\_| GEL

<i>(Don't know)</i>	98
<i>(Refuse to answer)</i>	99

I3. What were the sources of your family's income during the past month?  
 [Interviewer! Multiple answers possible. RANK]

Sale of primary agricultural goods and products (milk, grapes)	
Sale of processed agricultural goods and products (cheese, wine)	
Other agricultural activity	
Job	
Non agricultural business activity	
Cash from friends and relatives living inside the country	
Cash from friends and relatives living outside the country	
Aid from international organizations	
Targeted social assistance	
Social assistance for IDPs	
Pension	
Other social assistance	
Other (Specify) _____	
<i>(Don't know)</i>	98
<i>(Refuse to answer)</i>	99

I4. What was the value of your family's income last month, excluding pensions and all other social payments?

[Interviewer! Write down the number.]

|\_\_|\_\_|\_\_|\_\_| GEL

(Don't know)	98
(Refuse to answer)	99

Gender

G1. Who in your family is most knowledgeable about farming practices?

Self	1
Spouse (wife or husband)	2
Son or Daughter	3
Grandchild	4
Daughter in law or son in law	5
Parent (Mother or father)	6
Grandparent	7
Brother or Sister	8
Mother in law or father in law	9
Relative (uncle, aunt, etc.)	10
Other (Specify _____)	11
(Don't know)	98
(Refuse to answer)	99

G2. Who in the household makes the principle decisions on which crops to plants, and animals to raise?

Self	1
Spouse (wife or husband)	2
Son or Daughter	3
Grandchild	4
Daughter in law or son in law	5
Parent (Mother or father)	6
Grandparent	7
Brother or Sister	8
Mother in law or father in law	9
Relative (uncle, aunt, etc.)	10
Other (Specify _____)	11
(Don't know)	98
(Refuse to answer)	99

T3	Time of family interview end [Use 24 hour format]	__ __  Hour	__ __  minute
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